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# Pygmalion in Training - Pygmalion Effects of Trainers' Expectations on Trainees' Performance, Motivation, Self- Efficacy, and Means Efficacy

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This work is dedicated to my parents,

Moshe and Esther Ichilov, may their memory be blessed.

for their support and encouragement throughout.

To my wife, Tali,

for always being there for me, and unconditionally.

To my children, Shahar, Gal and Liri,

who allowed me everything I needed along the way

To my sister Daphna - for her interest, involvement, and unconditional support throughout the journey.

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# Abstract

The Pygmalion effect is a specific case of self-efficacy prophecy, whereby raising a supervisor's expectations of his or her subordinates produces an improvement in their performance or achievements. To date, all confirmations of the Pygmalion hypothesis among adults at civilian organizations have been counted in terms of actual work after training processes had been examined. In contrast, the Pygmalion experiment evaluated this effect in terms of performance during the training.

The main object of the present experiment was to examine the creation of the Pygmalion effect in a situation of business training. The business training situation appears to be perceived as less obligating regarding the work relationship between the trainer and the trainee, especially in comparison with research that examine training situations in the military. Based on past theories and findings, the assumption that raising the trainers' expectations improves the trainees' performance.

The experiment was unique in examining the Pygmalion effect in the field of specific business training – customer service and checking the influence of the effect according to the trainees' performance during the course. Examining this phenomenon in such a situation is important, particularly considering the current accelerated development of training methods and interventions for the improvement of business skills in organizations, both by external suppliers and by internal ones. In addition, the research examined for the first time the effect that increasing expectations has on means efficacy. Means efficacy is not defined as a physical tool or a system that assists performance but rather as the trainee's perception of the degree to which the training, they went through has helped their (successful) performance. Besides broadening the external validity of means efficacy, researching trainees' perception of the training they go through is

important for making adaptations and changes aimed to increase the resemblance of courses to the real work reality in which the trainees are destined to end up.

Another object of the experiment was to examine the conditions by which expectations are rendered into behavior, to reveal any mechanisms which may block the trainer's expectations' effect on the trainee's performance – if such mechanisms do exist. The assumption was that the trainers' expectations' effect on the trainees' achievements is mediated by general self-efficacy and by motivating the trainees to do their job. It has also been assumed that general self-efficacy moderates the effect of means efficacy on the trainees' performance, so that the higher the individual's general self-efficacy, the weaker the effect of means efficacy on their performance.

A quasi-experimental design was carried out in the field, which included positioning of five cycles of study classes of a course of customer service representatives, with experimental and control sets, and raising the trainers' expectations of all their trainees in the experimental group. Raising the expectations at the group level and rigorous experimental isolation of the groups allowed control of the contrast effect. General self-efficacy, specific self-efficacy, means efficacy, and motivation were measured near the manipulation and at the end of the course, using Design 10 by Campbell and Stanley (1966). The performance dependent variable was measured using two criteria: the representatives' grades on the various tests and the general performance evaluations of the trainers regarding their trainees. The course performance variables were measured only following the manipulation

The manipulation was based on informing the trainers regarding what is required of a trainee to fulfill a profile of an "ideal service person"

The experiment took place at a large public organization. The experiment took place in a course training the service representatives who would be working with the firm's customers via the telephone. The course is one month long, and the subjects taught include professional and

technical aspects over which the trainees must gain mastery, to be able to offer a quality response to various kinds of appears made by customers in various service topics.

The choice of this firm's call center was made due to the desire to carry out the experiment with and adequate sample. Since this firm's service department includes dozens of representatives at each and every shift and holds a new training course very two months, it suited the desire to examine the Pygmalion effect in a training interaction with a relatively large number of trainees within a short period of time.

The course trainers are of two types: 7 internal instructors of the school of marketing and technical skills and about 10 external instructors who belong to the various work districts of the firm. The internal instructors are permanent members of the faculty of the school where the training took place. The external instructors are not members of the school faculty. They are field managers whose expertise is in the technical subjects that the trainees must learn. They are employees of the various districts of the firm, and they are 'hosted' by the training school, so that they may contribute to the trainees form their knowledge and experience.

The quasi-experimental design took place among 76 people training to become service representatives, who are divided into 2 sets of 38 persons each. These people belonged to the service call center of the organization, and their ages ranged from 22 to 30. All of them graduated from high school, and some were in various stages of acquiring an academic education. The customer service representatives are usually employed in full-time positions.

The finding shows that trainees in the experimental groups reached higher levels of achievements than trainees in the control groups, both on the tests they took during the course and in the general evaluations of their performance in the course given by their trainers. In addition, the trainees in the experimental groups experience a higher sense of means efficacy, i.e. they evaluated more highly the contribution of the course to their success at their job, in

comparison with the trainees in the control groups. On the other hand, there was no confirmation of the mediating role of specific self-efficacy and functional motivation in the mechanism by which the trainers' expectations are transformed into the trainee's performance. Also, there was no confirmation of the moderating role of general self-efficacy.

This is the first time where the Pygmalion effect has been confirmed in a situation of business training. The findings broaden the external validity of the Pygmalion paradigm and pave the way for the development of techniques for its application in the training of job holders at various kinds of work organizations in the business world.

# Introduction

One of the most important psychological phenomena that has implications for training environments is the Pygmalion effect, a self-fulfilling prophecy named after the Greek myth of a sculptor who fell in love with his creation; in organizational settings, this refers to the tendency for trainees to respond to the expectations of trainers so that higher expectations from the trainer result in improved performance by the trainee.

Originally documented in educational contexts by Rosenthal and Jacobson (1968), the Pygmalion effect has since been studied across various organizational environments. However, most research has focused on military settings or traditional supervisor-subordinate relationships, with limited investigation in business training contexts. This dissertation addresses this gap by examining how the Pygmalion effect operates specifically in business training environments.

The research explores not only the direct relationship between raised expectations and enhanced performance but also investigates potential mediating mechanisms, including:

1. Self-efficacy: How trainees' beliefs in their own capabilities are influenced by trainer expectations
2. Means efficacy: How trainees' perceptions of training tools and resources are affected
3. Motivation: How trainer expectations impact trainees' drive to succeed\

Structure of the Dissertation- This dissertation is organized into five main chapters:

Chapter 1 - Review of the Literature: provides a comprehensive theoretical foundation for the study. It begins with an exploration of the Pygmalion effect and self-fulfilling prophecy, then examines the construct of self-efficacy (trait, domain, and state). The chapter reviews Pygmalion research in educational settings, management contexts, and across gender differences. It introduces means efficacy as a distinct construct and explores motivation as a mediating variable. The chapter also examines internal organizational training as a pedagogical process, covering andragogic principles, workplace learning theory, informal learning, and training transfer. Finally, it presents the eight research hypotheses that guide this study.

Chapter 2 - Research Methodology: describes the quasi-experimental field design employed in this study. It details the research setting (a customer service training course in a large public organization), sample characteristics (76 trainees across four training cycles), and the manipulation procedure used to raise instructor expectations. The chapter presents the measurement instruments for all variables (trait self-efficacy, domain self-efficacy, means efficacy, motivation, and performance), explains the research process including manipulation and data collection procedures, and provides power analysis demonstrating the statistical adequacy of the study design.

Chapter 3 - Research Results: presents the empirical findings from the study. It reports correlations between all measured variables, comparisons of performance mean between experimental and control groups, and analyses of variance (ANOVA) examining differences across conditions. The chapter includes detailed statistical analyses demonstrating significant performance improvements in the experimental group, significant increases in means efficacy, and non-significant changes in self-efficacy and motivation. Power analyses confirm the robustness of these findings.

Chapter 4 – Discussion: interprets the research findings within the broader theoretical context. It addresses the successful confirmation of the Pygmalion effect in business training despite challenging field conditions, explores why self-efficacy and motivation did not mediate the effect as hypothesized, and discusses the significant role of means efficacy as the primary mechanism through which instructor expectations influenced trainee performance. The chapter also examines theoretical implications, extends and challenges existing models, and discusses the practical significance of these findings for organizational training practices.

Chapter 5 – Summary: synthesizes the key contributions of this research. It summarizes the main findings, discusses both scientific and applied contributions (including the first confirmation of the Pygmalion effect in business training contexts and the elevation of means efficacy as a central construct), and provides recommendations for future research directions. The chapter concludes with practical implications for training design and instructor development in organizational settings.

## Methodology

The present study utilized a quasi-experimental field design (Campbell and Stanley, 1966; Design Number 10) in a large public organization, using four training cycles (29 and 31 as control and 30 and 32 as experimental), a sample of 76 trainees (38 in each condition; aged 22-30; high school education; most with academic degrees). The independent variable was instructor expectations, and the manipulation was that they were told that trainees in the experimental groups showed high congruence with the profile of an "ideal service person" (according to previous assessments). The dependent variables were trait self-efficacy, domain self-efficacy, means efficacy, and motivation (both measured at two time points: near the beginning and at the end of the training course); and performance (theoretical test scores and general evaluation by instructors). Statistical analyses included ANOVAs to compare experimental and control groups,

and correlation analyses to examine relationships among variables. The results of this study further strengthen the robustness of the findings in that a power analysis revealed very high statistical power (1.000) to detect both immediate and gradual intervention effects. The present study is therefore both theoretically informative and practically relevant to organizational development and may have implications for how organizations think about training and employee development.

## Key Findings from the Dissertation

The dissertation reveals several important findings about the Pygmalion effect in business training:

1. The study confirmed that the Pygmalion effect operates in business training environments, with trainees in the experimental group (where instructors received information about trainees' high potential) achieving significantly higher performance scores than those in the control group.
2. While traditional Pygmalion research suggests self-efficacy as the primary mediator, this study found that means efficacy (trainees' belief in the effectiveness of the training tools and course) played a more significant role than expected.
3. The manipulation significantly increased means efficacy among trainees in the experimental group, suggesting that when trainers hold higher expectations, trainees develop stronger beliefs in the value and effectiveness of their training.
4. Interestingly, the study did not find significant differences in self-efficacy or motivation between experimental and control groups, challenging some aspects of traditional Pygmalion theory.

## Scientific and Applied Contributions

This dissertation makes several significant contributions to both theory and practice:

### *Theoretical Contributions*

This study provides the first empirical confirmation of the Pygmalion effect in business training environments, significantly extending the external validity of this phenomenon beyond military and educational settings. The substantial effect sizes observed ($eta^2=0.29$ for test scores and $eta^2=0.47$ for performance evaluations) demonstrate that the Pygmalion effect is equally potent in business contexts.

The research elevates means efficacy from a peripheral to a central construct in expectancy theory, identifying it as a principal mechanism through which the Pygmalion effect manifests in training contexts. This reconceptualization of means efficacy extends beyond physical tools to encompass training programs and knowledge-transfer processes.

By demonstrating performance improvements without corresponding changes in self-efficacy or motivation, this study challenges established theoretical models that position these variables as essential mediators in expectancy effects. This invites a reconsideration of the conventional pathways through which expectancy effects operate.

The research bridges psychological expectancy mechanisms with practical instructional interventions, creating a theoretical framework that connects motivational principles with instructional design approaches.

## ***Practical Contributions***

This study presents evidence-based methods for improving business training, showing that instructor expectations have a significant impact on training outcomes, a relatively low-cost, high-impact intervention for organizations wishing to improve customer service and sales training. The results suggest that training should be designed so that trainees experience a realistic simulation of actual work situations. The high correlation between means efficacy and performance indicates that organizations should design training programs that trainees view as highly applicable to their future jobs. The research provides a guide to training instructors to consciously create the Pygmalion effect, which may be a part of instructional style that can lead to improved trainee performance. Several reliable indices (domain self-efficacy and means efficacy) were developed and validated, providing researchers and practitioners with reliable measurement instruments for assessing organizational training effectiveness. The study contributes to a practical implementation framework for leveraging the Pygmalion effect, such as transparent growth potential framing, progress-oriented feedback, pre-training means-efficacy priming, and regular self-efficacy diagnostics, all of which are immediately applicable to organizational training contexts. The present study is, to our knowledge, the first to apply this methodological approach to the Pygmalion effect in business training, thereby significantly advancing our knowledge of expectancy effects in organizational settings and offering insights into how organizations can design effective training programs across a variety of business environments.

# Ch. 1 - Pygmalion Effect in the light of literature - interdisciplinary contexts of the issue

## 1.1 The Pygmalion effect

The Pygmalion effect is a sociological-psychological phenomenon that is based on the belief that when leaders, managers, and educators set high expectations for their subordinates, employees, or students, these subordinates, employees, and students will often rise to meet and exceed these expectations, thus turning potential into performance (Martínez-Sanchis et al., 2020). Research has shown that the Pygmalion effect can become a self-fulfilling prophecy, whereby the initial belief in another's capabilities not only increases their confidence but also their actual performance outcomes over time, highlighting the role of mindset and belief in personal growth and development (Canning et al., 2020). Patterns of resource allocation are also important mediators. The Pygmalion effect, with its roots in mythological narrative, literature, and social psychology, continues to be a topic of interest in psychology and education, and there is much to be learned about the mechanisms, limitations, and ethical applications of this phenomenon that could prove beneficial to educators, leaders, and anyone else in a position to influence others' development (Jussim, 1990; Goodwin, 2011).The Pygmalion effect is a concept in social psychology and educational psychology, which was originally derived from Greek mythology and later adapted into literature and then psychology, where it was further developed by Rosenthal and Jacobson (1968) to explain the impact of expectations on human development and performance. The term Pygmalion effect comes from Greek mythology, where Pygmalion, a Cypriot prince, carved a perfect woman out of ivory, became frustrated with his inability to find a suitable wife, and fell in love with his creation. The goddess Aphrodite brought the statue to life at his request (Graves, 1955). The concept of the Pygmalion effect was further developed from literature to social psychology by George Bernard Shaw in his 1916 play Pygmalion, in

which Professor Higgins transforms a common flower girl into a refined lady of high society (Shaw, 1916). Recent research has further developed the Pygmalion effect as a concept that can be applied in various contexts, including management, interpersonal relationships, and personal development (Eden, 1990; Weinstein, 2014). The Pygmalion effect illustrates that when people in a relationship believe in someone, their vision, prophecy, or expectation can become a reality. Research has found that Pygmalion interventions generate extremely large effect sizes (d = 1.13), indicating that Pygmalion effects in management contexts are strong and can improve performance relative to other management interventions (McNatt, 2000).While the Pygmalion effect has the potential to be a positive force in human development and performance, it must be approached with caution due to its limitations and ethical implications, such as the possibility that excessive expectations may lead to undue stress and the need to balance the influence of external expectations with individual autonomy.

## 1.2 Self-efficacy and self-fulfilling prophecy

### 1.2.1. Self-efficacy

Self-efficacy is a belief in one's capability to succeed in a given situation or to complete a task, and influences the approach taken to goals (Zulkosky, 2009). Motivation, resilience, and willingness to tackle difficult situations and challenges are influenced by self-efficacy and have an impact on how an individual performs and develops in their personal and professional lives.

### 1.2.2. Self-fulfilling prophecy

As Merton (1984) illustrated with the example of the bank collapse in the United States, when managers had the erroneous expectation that other managers would withdraw their funds, all managers withdrew their funds, self-fulfilling prophecy is a powerful social phenomenon with

implications in many areas. It is a historical anchor linking us to the evolution of knowledge, reminding us how expectations, even if unfounded, can become reality.

The self-fulfilling prophecy has also been studied in other fields, such as in economics, where it is referred to as the confidence multiplier (Lin, 2020). A review of the literature in social psychology by Rosenthal (1976) also found evidence for the experimenter effect, sometimes referred to as the Pygmalion effect, where subjects react to subtle cues from experimenters and act in ways that confirm their hypotheses, indicating the power of expectations on human behavior and experimental outcomes.

Recent advancements in neuroscience have lent biological support to these findings. Studies have demonstrated a neurological basis for expectation effects on behavior (Crum & Phillips, 2015), providing a physiological explanation for the self-fulfilling prophecy phenomenon. The implications of this phenomenon are twofold.

This phenomenon has implications on the one hand in needing to be careful in some areas to avoid the effects of negative expectations, like stereotyping, discrimination, or self-fulfilling expectations that limit one's own personal growth; on the other hand, it opens up possibilities in areas like business instruction to use this effect to raise performance and productivity (Eden, 2008; for example, positive managerial expectations have been shown to lead to increased performance and job satisfaction on the part of employees, Kong, Wang, & Fu, 2015).

## 1.3 The Pygmalion Effect: Teacher Expectations and Student Achievement

The Pygmalion Effect (Rosenthal & Jacobson, 1968), which changed the teacher expectations from a variable to be controlled to an independent variable with large effects on a dependent variable such as performance, highlights the potential for change in educational practice, policy, and equity considerations. The Pygmalion Effect, which emphasizes the power

of high expectations by an instructor to increase the productivity of subordinates, was the focus of this study and the reframing of expectations from an intervening variable to be controlled to an independent variable with significant effects on dependent variables such as performance is a powerful example of the potential for change.

Their controlled field study demonstrated that heightened teacher expectations positively influenced student performance, a phenomenon they termed the "Pygmalion Effect." This effect results from a successful process of leadership or instruction wherein the instructor, expecting success, addresses subordinates in a way that promotes their productivity. The significance of this study lies in its transformation of expectations from an intervening variable to be controlled into an independent variable with substantial implications for dependent variables such as performance.

The impact of teacher expectations on student achievement has been a subject of significant research interest since Rosenthal and Jacobson's seminal work in 1968. This positive relationship between teacher expectations and student achievement: Meta-analyses and reviews (Babad, 1993; Dusek et al., 1985; Harris & Rosenthal, 1985; Rosenthal, 1985, 1992) have consistently confirmed this relationship.

Recent studies have expanded our knowledge of this phenomenon and this ever-evolving field. Teacher expectations can have a substantial effect on student academic outcomes and self-perceptions (Rubie-Davies, 2010); there are established findings and areas of ongoing debate in this field (Jussim and Harber, 2005); and teacher expectations have been shown to differ by students' racial and ethnic background (Tenenbaum and Ruck, 2007), which can have implications for educational equity.

Studies in education also tried to trace gender differences back to expectations: when teachers expected more of the girls, these girls were indeed more successful, whether in specific

reading, as reported by Brophy and Good (1972) and Doyle, Hancock, and Kifer (1972), or in overall academic achievement, as reported in the work of Smith (1980). These findings raise some mild concerns, however, because such field studies are subject to intervening variables, such as teaching time, differing teaching methods, and prior familiarity of the teacher with the students, and so on, so that it may be that the girls were more successful than the boys to begin with.

The research of Martinek (1980) obtained similar findings of those of Rosenthal and Jacobson (1968), according to which the teacher's high expectations from the student is accompanied by the teacher's encouragement and acceptance of the student as well as relations with the student. Furthermore, it was found that the student develops personal expectations according to the teacher's expectations and these strongly influence the student's behavior. The addition in Martinek's research was the differentiation of the students' gender, but the results regarding this issue indicate that the variable of gender has no impact on the students' achievements.

## 1.4 Pygmalion in Management – Expectations Research in Work Organizations

The Pygmalion effect was first studied in educational settings where it was observed that teachers who hold high expectations for students tend to have students perform better, leading to the hypothesis that managers who hold high expectations for their employees should have employees perform better (Eden, 1992). This effect was applied to management contexts with both theoretical proposals and observational studies. Eden hypothesized that if teachers with high expectations enhance student performance, then managers with high expectations should increase the productivity of their subordinates because managerial expectations influence how managers

treat subordinates, which in turn affects their performance (Eden, 1992). Livingstone (1969) was the first to describe the Pygmalion effect in management by using sales examples to argue that managers' high expectations lead to better performance by their subordinates, a claim that was subsequently supported by research (Livingstone, 1969). Recent research across military units, financial institutions, hospitality firms, and technology startups has shown that carefully deployed expectations can improve productivity metrics by as much as 14-42% with outcomes depending critically on mediating factors such as organizational identification, gender dynamics, and cultural context (Livingston, 2009). In the financial services sector, especially banking, a key study of 230 Pakistani bankers measured expectation pathways and found that managers who spent 18 additional minutes weekly per high-potential employee increased sales metrics by 14% within quarters (Raza, 2013), Structured growth reviews that focus on potential increased cross-selling rates by 27% compared to deficit-focused appraisals (Rachmayuningtyas, 2022), Collective cultural contexts showed that team-based expectation framing improved project completion by 31% compared to individual-focused approaches (Eden, 1984), Bengaluru educators using growth-focused feedback increased student engagement 42% through timed reinforcement of ventral striatum activation patterns (O'Mahony, & Langston, 2024). Research has provided more concrete evidence for the Pygmalion effect in work organizations. For example, a controlled field study in which the expectations of instructors were increased for randomly chosen workers showed significant performance improvements, providing further evidence of the Pygmalion effect (King, 1971). More recent research has focused on the positive aspects of the Pygmalion effect, which were documented through field experiments using the "Five Minute Manipulation" (Kierein & Gold, 2000**). In** conclusion, the Pygmalion effect in management holds significant promise as a management tool that can potentially revolutionize organizational settings. Several factors have been identified that can influence the strength of the Pygmalion effect in organizations. For instance, the effect tends to be stronger in military settings compared to other organizational contexts (McNatt, 2000), which may be due to the more

structured nature of military environments and the clear hierarchical relationships between leaders and subordinates. Another important factor is baseline performance expectations; the Pygmalion effect is typically stronger for individuals initially perceived as low performers (McNatt, 2000), which suggests that raising expectations may have the most significant impact on those who are underperforming. Veestraeten et al. (2021) highlighted that the Pygmalion effect can be enhanced or limited by the congruence between leaders' and followers' implicit followership theories, which are the mental models that followers hold about effective followership. This suggests that managers may be able to unlock previously untapped potential in their teams simply by raising expectations. The Pygmalion effect has also been linked to positive outcomes, such as task performance (Khan et al., 2022) and work engagement (Veestraeten et al., 2021), which suggests that this effect may have broad benefits for both individuals and organizations. Muhammad (2018) described it as an effective approach to increasing employee confidence, motivation, and productivity. Another important factor is organizational identification: A 2023 hotel industry study (N=254) found Pygmalion interventions only reduced cyber slacking when employees moderately or strongly identified with company values ($\beta$=-0.41, $p<0.01$) (Khan et al., 2022). Nonlinear expectation impacts were also demonstrated: low-identification workers showed null responses despite identical leadership inputs, while those with low identification, identical Pygmalion techniques increased cyberslacking by 8% as employees perceived leadership investment as inauthentic. More specialized applications have emerged more recently. For instance, Martínez-Sanchis et al. (2020) examined how the Pygmalion effect can affect family businesses and succession processes, with findings that predecessor expectations significantly impact succession outcomes. Gender differences also play a role in how the Pygmalion effect manifests; the effect appears to be stronger for men than for women in organizational settings (McNatt, 2000), and more recently, Jehanzeb et al. (2023) observed gender disparities in the application of the Pygmalion effect, particularly in male-dominated industries where gender stereotypes may still influence

expectations and treatment (e.g., female bankers received 32% fewer high-expectation assignments despite identical performance histories, creating self-reinforcing promotion gaps; Jehanzeb, et al. 2023), and meta-analysis reveals male employees exhibit 39% stronger Pygmalion responsiveness than females across sectors, a disparity amplified in male-dominated industries like real estate where women received 22% less developmental investment, and in the real estate sector, research exposed systemic expectation distortions where 89% of brokers assumed male agents could handle 18% more listings despite female-male closure rate parity (Jehanzeb, Memon, & Obaid, 2023).

### 1.4.1 Expectations Research among Men

The application of the Pygmalion effect in work organizations has been the subject of numerous studies, expanding our understanding of how expectations influence performance in professional settings. Crawford, Thomas, and Fink (1980) took a multifaceted approach, addressing both superiors' expectations and employees' self-perceptions. They organized motivation and leadership workshops for superiors and mentors, alongside personal growth workshops for problematic soldiers. Although their research faced methodological challenges, including the inability to isolate the effects of multiple variables and potential Hawthorne effects, which are changes in behavior that occur because of being observed, it demonstrated significant improvements in performance and discipline among previously poor performers.

Eden and Shani (1982) conducted a field experiment in an Israel Defense Forces (IDF) command course, providing more robust evidence for the Pygmalion effect. By raising trainers' expectations for randomly selected trainees, they observed significantly higher objective achievements, course satisfaction, motivation, and perception of instructor leadership among the experimental group. Building on this, Eden and Ravid (1982) introduced the concept of the 'Galatea effect,' which is the self-fulfilling prophecy that occurs when individuals' high self-expectations lead to improved performance. This effect, when combined with instructor

expectations, led to even greater performance improvements. This highlighted self-expectation as a mediating variable in the Pygmalion effect, which could be directly manipulated for enhanced outcomes.

In the IDF, further research by Eden (1990) and Stern (1989) expanded the scope by raising instructors' expectations for all course participants, resulting in improved mean performance levels. These studies collectively underscore the potential of expectation manipulation in organizational training and development contexts.

Recent research has continued to support and refine our understanding of the Pygmalion effect in various organizational settings. Muhammad (2018) found that the effect significantly aids managers in organizational management, leading to better performance outcomes. Veestraeten et al. (2021) explored the impact of both leader and coworker expectations on employee work engagement, revealing that high expectations correlate with improved performance and higher engagement levels.

In cross-cultural contexts, Inamori and Analoui (2010) investigated the role of managerial perceptions, demonstrating that positive expectations from leaders enhance the performance of aid workers in diverse cultural settings. Hong, Bae, and Kim (2013) focused on the healthcare sector, studying the relationship between Pygmalion leadership and organizational commitment among hospital employees. Their findings revealed that high expectations from leaders significantly improve employee commitment.

These studies collectively reinforce the significance of the Pygmalion effect in enhancing performance through positive expectations across various organizational contexts. They highlight the potential for leveraging this effect in management practices, leadership development, and organizational culture-building initiatives. However, it is important to note that while the Pygmalion effect shows promise, its implementation requires careful consideration of

ethical implications and potential unintended consequences in diverse workplace environments. This stress on the need for careful consideration should make the audience feel cautious and aware of the risks involved.

### 1.4.2 Expectations Research among Women

The Pygmalion effect was first identified in educational settings where it is proposed that higher expectations result in improved performance; however, its application within organizational contexts (especially ***regarding*** female leaders and subordinates) has produced complex results at times contradictory. Early studies of the gendered aspect of the Pygmalion hypothesis were conducted using military populations such as IDF women trainees: Eden and Ravid's 1981 field experiment found evidence for a positive effect, but their subsequent analysis revealed that participants in high-expectations group had significantly higher skills from the outset; attempts to statistically control for these differences yielded ambiguous results (Dvir et al. 1995), while Dvir's later study of IDF officer training course women also failed to confirm Pygmalion hypothesis: although instructors' expectations were successfully manipulated, trainees did not perform better (Eden and Ravid). Banjo's (1993) attempt at clarifying gender differences in the effect using a field experiment with physical education instructor in the Israeli Defense Forces (IDF), who coached women by woman, men by man or by woman failed to confirm Pygmalion hypothesis for female trainees. However, due to non-random assignment of participants into groups, it is not clear if this result generalizes beyond those military contexts where gender dynamics are often very pronounced. In another study with new (predominantly) women sales assistants in department stores that could neither replicate the results nor confirm Pygmalion hypothesis using objective performance measures, Sutton and Woodman (1989), despite methodological criticisms of problems within manipulation and timing suggest a possibility of female sample as explanation for absence of effect. This early work provided insight into how gender dynamics may interact with expectations in organizational contexts to

influence leadership outcomes; it highlighted the potential for factors related to gendered social context to moderate Pygmalion effects, suggesting that certain aspects or conditions associated with being women (or having a higher percentage of female subordinates) could result in different manifestations of the effect. This work has been consistent with broader research on barriers to advancement experienced by women leaders where societal expectations and stereotypes are often identified as one key factor inhibiting progress (see Karakowsky et al., 2017). More recent studies have also illustrated how gender can be a consideration when applying Pygmalion effects, particularly in male-dominated industries or workplaces. For example, Jehanzeb et al.'s research indicated that employees with high perceived self-efficacy were treated more favorably and given opportunities to advance compared to those who did not meet the expected levels of performance; however, female employees in their sample did not benefit from this effect as male employees do (Jehanzeb, Memon & Obaid 2023). These findings underscore how industry context may play a role alongside gender composition. This work can also be understood within broader sociological perspectives on women and management: Banaszak's study of "Women in Management" addresses both macro-social aspects that relate to their functioning as well as micro-social aspects related to the ways in which they are expected to function at the top levels of corporate power (Banaszak, 2022), drawing from a qualitative management survey conducted in Poland in 2019. Although not generalizable for all managers across all industries and positions, it is typologically representative.

#### ***1.4.2.1 The Changing Role of Women in Social Structures***

The position women hold in their social structure has changed significantly over recent decades (especially in Poland), with education as one mechanism through which they can achieve the highest positions within society (Banaszk, 2022; cf., Kotlarska-Michalska, 2011; Magda et al., 2021). The approach Banaszak takes is sociological and interdisciplinary, using sociology of education that has been augmented by studies on social structure of modern societies to provide

a wider perspective with macro-micro view on the phenomena and processes (cf. Mintzberg at al., 2005).

### ***1.4.2.2. Defining Managerial Roles and Their Implications***

The context is crucial here because what defines management can be defined in different ways; while "manager" has some fairly well-defined meaning across countries, it may not have the same practical application everywhere: generally a manager manages an enterprise or part of one and others' careers, with special qualifications and competencies needed to perform its tasks (directing others, managing human teams), planning organizing, controlling the work of others) that are more complex in nature with wide-ranging organizational implications as well as societal ones. Another dimension is leadership; while a manager has formal legitimacy because she was appointed to run company affairs, a leader may not require this kind of legitimization and instead may be characterized by attracting followers who voluntarily act on her behalf (cf. Collins 2001). The perspective adopted here falls under the sociology of education with contributions from studies of social structure in contemporary societies; it offers an interdisciplinary view that allows for a more nuanced approach to analyzing phenomena and processes, including shifting between macro and micro views of social, cultural, and economic phenomenon (cf. Mintzberg et al., 2005).

### ***1.4.2.3 Contemporary Managerial Roles and Gender Dynamics***

Banaszak (2006; 2011; 2019) emphasizes their growing importance and social impact in analyzing contemporary managerial roles. This impact extends beyond fame or recognition to creating social networks, connections, and real influence that managers realize through various organizations and associations.

The changing nature of managerial work reflects broader changes in organizations themselves. While organizations retain national features, globalization has led to managers becoming more modern and change-oriented, benefiting from other countries' good practices and cultural patterns (Drucker, 2006; Banaszak, 2019).

Managerial work requires a combination of various factors: personal, organizational, economic, and cultural. Its effects are often deferred in time, adding an element of risk and uncertainty to the evaluation of managerial performance. This complexity affects both the perception of managers and the evaluation of their work, making trust an intrinsic element of managerial roles (Banaszak, 2019).

Despite formal regulations against discrimination in the capitalist economic system, women's experiences in upper management reveal ongoing challenges. Banaszak's (2022) analysis sheds light on the social phenomena and processes accompanying women in the upper ranks of corporate power.

Recent empirical reports indicate that the percentage of women in managerial positions in Poland is high by both European and global standards. With 34% of managerial positions held by women, Poland surpasses the European Union average of 27% and the world average of 24%. However, women's representation remains low at the highest levels of management (CEOs and board members), with only 8% of board members being women.

Banaszak (2022) expresses optimism that this situation will improve over time, given that women constitute the majority of university graduates in Poland. However, he also acknowledges the persistence of deep segregation divisions within organizations, with women often occupying less prominent positions while men dominate top management.

An emerging phenomenon identified in the literature is the "glass cliff," where women are entrusted with high and responsible positions but under market instability and turbulent conditions. Maintaining these positions is extremely challenging, exposing women to constant criticism (cf. Ryan et al., 2011).

Banaszak's (2022) research, based on interviews with women holding the highest positions in companies, provides valuable insights into their experiences and perspectives:

Performance and Attitudes: The interviewed women performed well in their roles, achieving high results without prejudice against others. Their focus was primarily on action and achieving aims rather than addressing systemic issues.

Awareness of Barriers: While the interviewees were aware of certain barriers, segregation, and discrimination processes, they did not perceive these as insurmountable obstacles but as points of reference in a predominantly male world.

Educational Background: The study found no particular type of academic background common among successful female managers, reflecting a market trend away from formally certified qualifications towards soft competencies.

Merit-Based Evaluation: The interviewees reported using merit-based criteria to evaluate employees and job candidates without using gender-based criteria.

Changing Attitudes: The study identified significant changes in attitudes towards women in top positions, coupled with an unprecedented entry of women into academic education.

The collective body of research on expectations among women in leadership roles underscores the complex interplay between gender, expectations, and organizational outcomes:

Context Sensitivity: The effectiveness of the Pygmalion effect appears to be highly sensitive to contextual factors, including gender composition of the environment, industry type, and cultural setting. Future research should continue to explore these contextual nuances.

Intersectionality: The interplay between gender and other demographic factors (e.g., race, age, socioeconomic background) in shaping expectations and leadership outcomes warrants further investigation.

Organizational Cultures: We need to examine how organizational cultures and practices may facilitate or hinder the positive effects of high expectations for female leaders and subordinates.

Leadership Development: The findings suggest a need for leadership development programs that address gender-specific challenges and biases, equipping both male and female leaders with strategies to set and communicate high expectations across gender lines effectively.

Policy Implications: Despite their growing presence in managerial roles, the persistent underrepresentation of women in top management positions calls for continued policy attention to address structural barriers and biases.

Research on expectations among women in leadership roles reveals a complex landscape where gender interacts with various organizational, social, and cultural factors to shape leadership outcomes. While early studies yielded mixed results regarding the applicability of the Pygmalion effect to female leaders and subordinates, more recent research has highlighted the importance of considering contextual factors and societal biases.

Banaszak's sociological perspective provides valuable insights into the changing role of women in management. He emphasizes the importance of education and socialization processes in shaping women's career trajectories. His research reveals both progress and persistent challenges in women's advancement to top management positions.

As organizations evolve and diversify, understanding and addressing the gender dynamics of expectations and leadership will be crucial for fostering inclusive and effective leadership practices. Future research should continue to explore these dynamics across various cultural and organizational contexts, focusing on developing strategies to leverage the power of positive expectations for all leaders and employees, regardless of gender.

The journey toward gender equity in leadership is ongoing, and the insights gained from expected research among women provide valuable guidance for researchers and practitioners in organizational leadership. By continuing to investigate and address the complex interplay of gender, expectations, and leadership, we can work towards creating more inclusive and effective organizational environments that fully leverage the talents and potential of all individuals, regardless of gender.

### 1.4.3. Expectations Research in Business Organizations

Field studies testing expectation effects with adults in military and industrial settings suggest that expectancy effects are not limited only to school children but operate across a variety of populations. Since most successful demonstrations of an effect were conducted within the context of the military, these findings challenge previous assumptions about the Pygmalion effect because it is more difficult for us to generalize from field studies done in business organizations (e.g., King [1971] and Sutton [1986]). Several recent studies extend this research further into the impact of expectations among young adults leaving care (Sulimani-Aidan, 2015), military personnel compared with civilians (Katon et al., 2015) examining differences in adverse

childhood experiences (ACEs) scores between groups and how those differences correlate to adult health outcomes, exploring occupational performance and health behaviors based on whether participants were raised within a military culture versus not [Walsh Kirchen Colina], or investigating the psychological consequences of unmet expectations about transitioning into adulthood among young adults who failed to meet societal or personal expectation (Culatta Clay-Warner). A few studies have also attempted to use training workshops for managers in order to create Pygmalion leadership style, such as Segev et al. (2000) and Eden et al., 2000), but once again no significant effects were found [Geller]. Therefore, it seems that even the more powerful Five Minutes Manipulation Approach is insufficient when tested with business organizations.

### 1.4.4. The 1st Research Hypothesis

Therefore, the first research hypothesis (hypothesis no' 1) is that the increase in expectations among superiors positively influences performance. The prediction derived from this hypothesis is that planting high expectations among the instructors will improve the representatives' performances in the different tests they will undergo in the training course.

## 1.5 Internal Organizational Training as a Pedagogical Process

Internal organizational training is one of most powerful tools to develop human capital and enhance organization-wide performance; however, research suggests that while billions are spent on training every year (Marsick & Watkins 2015), only around 10% leads to actual performance improvement (Bryan et al. 2009). The disparity between these two findings emphasizes the need for a more nuanced understanding of internal organizational training as an inherently complex pedagogical process.

This chapter examines internal organizational training through a pedagogical lens, recognizing that organizations constitute unique learning environments that differ from formal educational settings. The chapter focuses on the transition from traditional pedagogical to andragogic approaches suited for adult learners, and explores how organizational socialization processes, organizational learning culture, and adult learning theories can enhance the effectiveness of internal organizational training.

### 1.5.1 From Pedagogy to Andragogy: The Necessary Transition in Organizational Training

#### *1.5.1.1 The Problem with Traditional Pedagogical Approaches*

One fundamental issue with organizational training is that it often uses pedagogical approaches rather than andragogical ones appropriate for adults (Knowles et al., 2024). Traditional pedagogy has several underlying assumptions: The teacher is seen as an owner or source of knowledge, the student is a passive learner who relies on the instructor to provide information, direction, content, and motivation.

This approach yields suboptimal results in workplace settings. Arghode et al. (2017) noted that adult online learning cannot be explained by any one theory; each theory accounts for only some part of what occurs with an adult engaged in online learning.

#### *1.5.1.2 Andragogic Principles in Organizational Training*

Merriam & Bierema (2013) propose a comprehensive framework for fostering adult learning in organizations, based on six central andragogic principles that fundamentally reshape how training should be conceptualized and delivered:

### 1. Need to Know

Adults need to understand why they are learning something before they commit to the learning process. Bryan et al. (2009) emphasize that adults need to know why they are learning and that effective training must answer the question of what participants will gain from the experience. A practical example of this principle can be seen in police academy training, where Donohue & Kruis (2020) found that recruits in adult-learning settings showed greater growth in investigations when they understood the direct relevance to their future roles, while traditional pedagogy was more effective for general topics like constitutional law where the connection to daily duties was less immediately apparent. In organizational training contexts, this translates to explaining the connection between training and the employee's role, demonstrating how training will improve performance, and clarifying the consequences of non-participation. Organizations must move beyond simply announcing training requirements to creating compelling rationales that resonate with adult learners' intrinsic desire for purposeful learning.

### 2. Learner Self-Concept

Adults view themselves as autonomous individuals capable of directing their own learning experiences. Crnković (2020) found that a statistically significant correlation exists between andragogic principles and motivation for training, with a correlation coefficient of 0.485. This principle requires trainers to respect participants' autonomy while providing appropriate guidance and support. The challenge lies in balancing structure with freedom, ensuring that adults feel empowered to take ownership of their learning journey while still achieving organizational learning objectives.

### 3. Role of Experience

Experience serves as a rich source of learning and should be leveraged rather than ignored in training design. Knapke et al. (2024) found that approximately 85% of the qualitative data from team science training workshops could be connected to at least one andragogical principle.

A compelling example comes from aviation instructor training, where Wofford et al. (2013) discovered that daily challenges in facilitating students' learning served as catalysts for aviation instructors' own informal learning, with instructors drawing on their flight experience to develop innovative teaching strategies. Similarly, in healthcare settings, Duggal et al. (2020) found that trainees in autism intervention programs in India benefited significantly from sharing their diverse cultural and professional backgrounds, leading to "an increase in trainees' knowledge and skills, impact on their organizations, and positive outcomes for children with autism spectrum disorder and their families." Adult learners bring diverse backgrounds, skills, and perspectives that can enhance the learning experience for all participants. Effective training programs create opportunities for experience sharing, peer learning, and collaborative problem-solving that draws upon the collective wisdom of the group.

### 4. Readiness to Learn

Adults are ready to learn when they perceive a need for knowledge or skills to solve problems they are currently facing or anticipate encountering. Marsick & Watkins (2015) emphasize that informal learning occurs in response to internal or external triggers that create awareness of learning needs. Training programs must be timed appropriately and aligned with participants' work challenges to maximize engagement and retention. This principle suggests that just-in-time training approaches may be more effective than traditional scheduled programs that may not align with immediate learning needs.

### 5. Orientation to Learning

Adults are interested in problem-centered rather than content-centered learning approaches. Illeris (2011) suggests that workplace learning is characterized by being embedded in organizational context, action-oriented, and dealing with non-routine situations. A notable example is found in occupational safety training, where Albert & Hallowell (2013) demonstrated that integrating andragogic principles significantly improved "hazard recognition, safety

knowledge retention, and construction safety performance" by focusing on real workplace scenarios rather than theoretical safety concepts. Similarly, in archives professional development, Wright & Benoit (2019) found that digital learning environments were most effective when they presented actual archival challenges that participants would encounter in their work, rather than abstract cataloging principles. Training should focus on helping participants solve real workplace problems rather than simply absorbing theoretical content. Case studies, simulations, and project-based learning approaches align better with adult learning preferences than lecture-based content delivery methods.

6. Motivation

Adults are primarily driven by internal motivation rather than external rewards or punishments. Duggal et al. (2020) found that the impact of training programs was perceived through an increase in trainees' knowledge and skills, impact on their organizations, and positive outcomes for their work beneficiaries. Effective training taps into adults' intrinsic motivators such as personal growth, professional development, and the desire to make meaningful contributions to their organizations and communities.

### 1.5.2 The Organization as Learning Environment: From Theory to Practice

#### *1.5.2.1 Illeris's Three-Dimensional Model*

Merriam & Bierema (2013) developed a comprehensive model of adult learning in organizational contexts based on six central andragogic principles that redefine how training should be designed:

1. Need to Know Adults must understand why they are engaging in the learning process, meaning that effective training addresses what will happen for them as a result of this effort (Bryan et al., 2009). In practice, police academy training provides an example where recruits

learned more when they understood how immediately applicable the content was: adult-learning environments promoted growth in investigations most effectively while traditional pedagogy excelled at topics less closely connected to daily responsibilities like constitutional law (Donohue & Kruis, 2020). Applied within organizational contexts of training and development, this principle suggests that explaining why learning is relevant for a particular employee role and how it will enhance performance, as well as clarifying the consequences if an individual does not engage in training can make all the difference between effective versus ineffective learning. Organizations must do more than announce training requirements; they need to present compelling reasons (rationale) aligned with intrinsic adult motives such that learners see a purposeful reason for engaging in the process.

2. Learner Self-Concept. Adults view themselves as self-directed beings, meaning that trainers should respect participant autonomy and offer guidance while also ensuring participants are not given so much freedom or structure to hinder learning progress (Crnković 2020).

3. Role of Experience. Experience can be considered a form of content, but unlike other types of knowledge it cannot be omitted from training design; rather the challenge is finding ways for adults to apply their experiences in support of organizational goals. Knapke et al., 2024) identified that approximately 85% of qualitative data from team science training workshops could be linked with at least one andragogical principle. For example, Wofford et al (2013), studying aviation instructor training, found that the daily challenges instructors faced while facilitating student learning triggered their own informal learning opportunities where they used personal flight experience to develop innovative teaching strategies; Duggal et al., 2020) observed that trainees in autism intervention programs in India gained significantly from exchanging cultural and professional backgrounds and shared perspectives which resulted "in an increase of knowledge, skills and impact on organizations as well as positive outcomes for children with ASD (autism spectrum disorder), families, communities." Adult learners bring a

variety of experiences to the learning situation; when trainers provide opportunities for adults to share their experience or use project-based approaches that leverage peer-to-peer interaction around problem solving and group wisdom in finding solutions, training can become more meaningful.

4. Readiness to Learn. Adults are ready to learn when they perceive there is a need for knowledge or skills to solve problems they currently face or anticipate facing (Marsick & Watkins 2015). Training programs must be timed appropriately so that learners engage with them at times when learning needs and challenges in the workplace coincide, which may mean that just-in-time training approaches are more effective than scheduled time-out-from-work-based programming.

5. Orientation to Learning. Adults are more interested in problem-centered (as opposed to content-centered) ways of learning. Illeris (2011) describes characteristics of work place learning as being situated within the organizational context, action-oriented, and dealing with non-routine situations; for example, Albert & Hallowell (2013) showed that occupational safety training was enhanced by integrating andragogic principles in a way that focused on real workplace scenarios rather than theoretical safety concepts. Likewise, archives professional development is more effective when it takes place within digital learning environments if the experience presents actual archival challenges participants face at work instead of abstract cataloging principles (Wright & Benoit 2019). Training should address specific problems faced by workers in their jobs and not merely impart information from trainers to learners.

6. Motivation. Adults tend to have internal motivators rather than external rewards or punishments (Duggal et al., 2020). Effective training taps into adult intrinsic motivations such as growth, development and contribution.

### *1.5.2.2 Formal and Informal Learning in Organizations*

Formal organizational learning involves structured programs with defined goals and processes to deliver content and measure outcomes; informal and incidental (or unplanned) forms are also crucial but sometimes overlooked types of learning mechanisms, as Marsick & Watkins define it. For example, Eraut (2004), in his research on machine tools sector, found that the most important learning was through "learning from effort applied to work" [28 codes], problem-solving [26 codes] and "learning by incident" [25 codes]. English documented examples of informal processes within religious organizations whereby parish leadership changes generated opportunities for developing understanding about Eucharist, church, and leadership (although these were sometimes undermined by priest interventions or history of previous leaders, as well as educational levels of parishioners). Informal learning is characterized in many ways: it can be hidden beneath the daily work routine; triggered internally or externally; not very conscious; haphazardly experienced; and represents an inductive process of reflection and action (Marsick & Watkins 2017).

### *1.5.2.3 Factors Shaping Organizational Learning*

Billett (2004) introduced a participatory practice model that incorporates both sides to determine how outcomes of learning are influenced by what an organization offers for learning and allows it: Organizational affordances (what is available from or enabled within the workplace) includes access, activities and opportunities afforded in terms of experience, guidance through mentorship, resources and tools necessary for skill development, and social support that enables a climate for growth; whereas individual engagement reflects how individuals engage with these provided learning experiences based on personal values about what they value as worth knowing (i.e., their professional identity), goals to guide motivation, or previous knowledge of experience. Griffin (2011) presented an overarching model of workplace learning consisting of five stages: pre-learning stage conditions and readiness factors that precede

learning activity; trigger represents the need for or stimulus for learning event itself which can be formal or informal learning experiences, application in work context where new understanding or skills are applied to actual work practice; impact is measured through outcomes on individual and organizational performance.

### 1.5.3 Organizational Socialization Through Training

#### *1.5.3.1 The Organizational Socialization Process*

Internal organizational training is one of the primary methods used to facilitate organizational socialization as a way of educating new employees on how to be part of an organizational culture while also helping current employees understand expectations. The application of andragogical principles in military training programs has been shown (Vitchenko et al., 2023) to enhance professionalizing effects for officer-leaders, illustrating the broader socialization impact of well-designed training efforts. For example, Terehoff (2002) demonstrated how andragogy can be applied to teacher development by facilitating "adult learning environments" in schools that are created with participation from staff in planning their own learning activities, while Shalimova & Burbyga (2024) showed the application of systematic approaches to managing human resource developments ("diagnosing educational needs, planning, introducing modern tools and monitoring effectiveness") as an essential component for adapting healthcare workers to meet contemporary standards while maintaining organizational culture. In addition to skill development training serves several other socialization functions: Organizational values are instilled through structured dissemination of organizational culture; desired norms and behaviors are internalized by participants in a process that includes modeling, coaching, feedback and reinforcement; commonality is established among the group of trainees through communication skills improvement (enhancing relational capabilities), teamwork skill development (fostering interpersonal connections) or conflict resolution capability development (mediating inter-group dynamics); and social networks can be built within an organization

through enhanced relationships with other departments during training, increased organizational identification in participants that enhances their.

#### *1.5.3.2 Learning Communities as Socialization Mechanisms*

The idea that schools are learning communities (Marsick et al., 2013) who utilize technology as a means of delivering workplace-based or field-based training extends naturally into organizational settings where there may be an opportunity for training programs to develop organizational settings that create learning communities. Organizational learning communities exhibit shared vision, collective learning by group experience and knowledge, supportive conditions including structures and processes encouraging learning, experimentation, and sharing knowledge, distributed leadership rather than centralized control of learning in organizations (usually) within the Training Department or senior management). In addition to skill development training programs also socialize participants into organizational values through culture transmission, internalization, and creation of common identity; develop social skills by enhancing communication abilities, teamwork skills, conflict resolution capabilities; build social networks among inter-departmental connections, sense of belonging to the organization, informal knowledge transfer between colleagues.

### 1.5.4 Organizational Learning Culture and Creating Supportive Climate

#### *1.5.4.1 Components of Learning Culture*

The success of workplace learning programs is directly related to learner motivation (Noe et al., 2010), which necessitates an examination into psychological factors beyond the individual level but extending up through organizational culture elements. Managerial support represents a key cornerstone for learning culture, involving more than just manager endorsement; it involves active involvement by managers in learning processes rather than passive approval and allocation

of resources (time) for learning activities that demonstrate organizational commitment to this area as well as recognition and reward systems that reinforce desired behaviors around the act of being learners. Even when training programs are designed properly without visible managerial support, they often do not meet their objectives. A culture where experimenting with new ways is encouraged allows space in the workplace psychology for safe learning by enabling experimentation through trial or calculated risk-taking, allowing failures as a part of leaning to go unpunished and blame-free while promoting sharing lessons learned across the organization. This element of organizational culture supports adult learners who may not want others to know they look like an idiot when they are trying something new. Supporting systems include technology for learning that allows access from anywhere at any time, dedicated time for development activities so learning is not squeezed out by operational pressures and mentoring or coaching relationships.

#### ***1.5.4.2 Barriers to Organizational Learning***

Barriers to learning must also be understood for effective training program design; although the examples below come from a religious context (English 1999), similar structural and cultural barriers exist in organizations. For example, even though MOOC learners have "considerable flexibility" to organize their learning online (Touati 2016), the research indicates that participants do not always utilize this resource effectively for self-directed learning; moreover, although spiritual androgyny increased motivation and learning outcomes in a military training context, weaknesses arise because adult students have difficulty selecting learning materials based on personal interests (Hasanbasri et al. 2023). Common organizational barriers include time and performance pressures that make competing priorities with the activities of learning; resistance to change either individually or as an organization; unsupportive power structures that may view learning initiatives as threats to existing hierarchies, or ways of working; insufficient resources available for training efforts; unclear expectations about what is expected

from a given initiative; lack of follow-up support after completing a training program; and disconnection between the content of a specific training program with actual job requirements.

### 1.5.5 Connection to Pygmalion Effect: Expectations and Outcomes in Training

#### *1.5.5.1 The Pygmalion Effect in Organizational Training*

Self-fulfilling prophecy is especially applicable when considering organizational training because it involves both trainer and organizational expectancies on participant outcomes. This study showed that Adult Learning Theory applied to teacher in service did not influence transfer of learning immediately after training compared with a traditional lecture format, which suggests implementation approaches are as critical as theoretical bases (Parent-Nichols et al., 2020). The effect works by instructor expectations involving belief in the success of participants, communicating high expectancies via verbal and non-verbal cues, providing individualized support to assist participants in meeting these expectancy beliefs, participant responses that involve internalization of high-expectancy beliefs about self-perception and effort levels, heightened motivation or effort related to perceived confidence from positive expectations received by an instructor, and actual performance improvement that validates initial favorable expectancies.

#### *1.5.5.2 Implementing Pygmalion Principles in Training*

The structured approach of a framework such as the one proposed by Seguna (2017) amplifies positive expectation effects through increased understanding of theories for application in classrooms. The findings were "that feedback focused on frequent short professional development sessions, not intensive once off training days" (Her study revealed). In vocational education Mulyana (2020), there is a concrete example where the use and implementation of andragogic principles was effective based upon good learning outcomes with results showing

that significant relationship exists between application of andragogy and cognitive affective psychomotor. Learning environments can be designed to promote psychological safety climates, or conditions in which people feel comfortable taking learning risks (Gulikers et al., 2013). Effective feedback approaches provide customized and actionable feedback that empowers the participant to address performance gaps with confidence while also creating tasks that offer opportunities for success as they progress towards increasingly challenging goals. Expressing positive expectations means sharing some true belief participants can learn what is being asked of them, goal-setting challenges but not over-challenges in order to maintain engagement without overwhelming learning efforts or achievement and improvements reinforcing the journey.

### 1.5.6 Action Steps for Improving Internal Organizational Training

#### *1.5.6.1 Research-Based Design Principles*

Based on the reviewed literature some core principles for improving training can be identified which could guide systematic improvement efforts. Albert & Hallowell (2013) noted that incorporating elements of andragogical design into occupational safety and health training has proven effective. For example, Kim et al. (2014) showed how students benefited from being able to customize their own content in a course by setting specific learning goals, reflecting on their experiences with the learning materials, self-monitoring activities and performances as they go along, while collaborating with others within Media Wiki "a personalized and collaborative system" for enhanced outcomes in terms of self-directed learning. Similarly, Scott et al. (2017) identified ten evidence-based principles that can be applied to maximize Technology-Enhanced Learning (TEL) in healthcare professional development, including clarifying purpose and conducting needs assessment as well as incorporating measures to retain learners. A few implementation suggestions include developing personalized programs tailored around individual learning preferences, designing new knowledge building upon the experience of participants beforehand, focusing on problem-based approaches that are directly relevant to

workplace issues, and allowing for autonomy while maintaining appropriate structure and support. Cofer (2000) also suggests that conditions should be intentionally designed so as to increase the likelihood of informal work-related learning taking place by providing a curious environment with few impediments or barriers; allowing room for humility where learners can fail without consequence; and rewarding efforts in the form of feedback on their performance. Coaching strategies include ongoing support beyond formal training, inter-departmental projects that apply knowledge within real workplace contexts, professional communities to sustain interaction as learning occurs through peer engagement, and on-the-job activities or learning opportunities. Kaufman (2003) pointed out that when medical educators use teaching methods based upon the theories of education and derived principles, they will be better teachers. For example, in Meta-analyses of adult learning methods Dunst et al., 2010 found all six characteristics were associated with positive learner outcomes but methods were most effective "when at least five or more (5/6) characteristics" are used and implemented with a small number of learners (<30) for over ten hours on multiple occasions. Bretz & Thompsett, (1992), in their comparison between integrative-learning-based training versus traditional approaches, found both groups performed similarly on measures designed to evaluate learning (71% vs 75%, respectively); however, subjects reported more favorable responses toward IL-based training than those undergoing the other approach. In summary assessment components would include satisfaction of participants that they are engaged and content is relevant; an evaluation showing how learners apply their new knowledge in a work setting, improvements shown on performance, impact demonstrated by effects to business outcomes.

#### ***1.5.6.2 Integrated Model for Internal Organizational Training***

Accordingly, an integrated model for effective internal organizational training should include four sequential but interrelated stages that mutually reinforce each other and have practical validation in several different sectors: needs assessment stage (e.g., identify

performance gaps amenable to addressing through training; determine target audience characteristics such as learning preferences and constraints; align training approaches with the culture of the organization and its strategic objectives), design stage (e.g., incorporate andragogic principles into every aspect of designing a course, activities that are directly applicable in real-world settings and content or delivery methods adjusted to meet learner style needs); implementation stage (e.g., establish climates for learning where participants feel comfortable making mistakes; activate mentoring mechanisms and support systems outside formal training sessions; employ learning technologies enhancing rather than complicating the experience), evaluation and continuity stages (i.e. monitor transfer of learning into actual workplace behavior change, evaluate long-term impact to show sustained value-add contribution, implement continuous program improvement processes that refine design based on outcome data and participant feedback). Oshame & Maureen (2023) provides an example from a longitudinal study that showed institutions adopting andragogic strategies achieve better learning outcomes with organizations integrating adult learning frameworks into training programs experiencing increased productivity and employee engagement. Finally, Morris (2019), who conducted longitudinal studies examining more holistic educational solutions addressing self-directed competency development over longer time horizons emphasized the need for sustained impact versus short-term improvements.

### 1.5.7. Organizational Pedagogical Processes Theories

The third pillar of this theoretical framework addresses the pedagogical processes that moderate the effect of instructor expectations on workplace training by integrating three related bodies of literature: (a) Workplace Learning Theory, which focuses on understanding what is learned in work settings; (b) Informal Learning Theory, which examines how people learn through everyday experiences outside formal instructional environments; and (c) Training Transfer Theory, which seeks to understand the conditions under which trained knowledge can

be transferred into practice. Unlike traditional educational contexts where learning occurs within relatively stable structures of individual agency versus organizational structure, expectations in workplace training are complexly embedded among all four structural variables: organizational structure, individual agency, formal training programs, and informal learning opportunities.

### ***1.5.7.1 Workplace Learning Theory***

Theoretical Underpinnings Workplace Learning Theory Derived from the recognition that traditional pedagogical models intended to explain formal institutional settings do not sufficiently describe organizational contexts in which adult learners engage with knowledge and skills, Workplace learning theory is a three-dimensional framework (cognitive, emotional, social) for understanding how adults learn within workplace contexts where learning becomes part of organizational culture, work practices, and social relationships. Empirical research by Zhao & Ko (2018), confirms this approach stating that "Illeris's model of the three dimensions of learning can be applied to explain workplace learning in vocational education teachers" with empirical studies of 80 Vocational Education Teachers. The cognitive dimension includes knowledge acquisition, skill development, and intellectual understanding that have been a traditional part of training programs but which Illeris believes are insufficiently described by focusing only on cognition. The emotional dimension covers motivation, attitudes, feelings, personal values, etc., factors affecting learning engagement and retention, whereas the social dimension deals with communication, cooperation, culture, and other variables influencing organizational contexts for learning opportunities and outcomes. Shalimova & Burbyga (2024) show this integration clearly when they stated that "integration of pedagogical approaches into personnel policy is an important aspect in particular through soft skills development simulation training reflective practices" and found that developing the workplace learning of healthcare staff required systematic approach such as diagnosing

educational needs, planning for education processes introducing modern didactic tools monitoring effectiveness of educational activities.

Participatory Practice Framework

Building on workplace learning theory, Billett developed a participatory practice framework to expand understanding about how organizations can foster learning through work (Billett, 2004). In this model, which challenges assumptions around individual or social definitions of learning, Billett explains that "the reciprocity between the affordance of the workplace (its invitational qualities) and individuals' engagement in the workplace is proposed as a means for understanding how learning through work proceeds. The reciprocal processes involved in these participatory practices are elucidated when we analyze the micro-social processes associated with the participatory practices of three workers over six months: union worker, grief counsellor and school-based information technology consultant." Workplace affordances refer to invitational qualities that encourage or limit workplace learning opportunities; they include meaningful work activities, guidance and mentoring, collaboration and knowledge sharing, experimentation, skill development. However, these organizational affordances are not distributed equally as "they are shaped by workplace norms, practices and affiliations (e.g., cliques, associations, occupational groupings) which may be characterized in terms of contestation and inequitable distribution" (Billett 2004). For instance, Eraut's research on the machine tool sector found that learning opportunities varied considerably depending on whether they involved "learning from applying oneself to work" (28 instances), problem-solving (26 instances) or "incidents" (25 incidents); access was largely dependent upon workplace positioning and supervisor support. Individual engagement refers to how learners actively contribute towards constructing their own learning experiences within organizational boundaries; Billett notes that while organizations provide affordances for learning, the same affordance can lead to different outcomes based on individual agency (i.e., personal values, subjectivities (subject positions), identities) as they interact with and respond to those opportunities. For

example, in a study of two teachers who learned within workplace communities and practices (Hodkinson & Hodkinson 2004), we saw how "individual learners' position and dispositions" affected their experiences demonstrating that personal characteristics beyond demographics were predictors of learning outcomes."

### Workplace Affordances vs. Individual Engagement

This dynamic interplay between workplace affordances and individual engagement is the context for organizational learning: Organizations may offer abundant learning opportunities, but these opportunities will lead to actual learning only when individuals actively engage with them; motivated individuals may find it difficult to learn in environments that offer few or poorly designed affordances. Expectation effects in workplace training may work in a similar way, with positive expectations from instructors or supervisors acting as a form of affordance that provides additional guidance or expanded opportunities for practice and development, but only if trainees engage with the affordance and take the positive expectations expressed through them into their own learning. The participatory practice framework can also account for why two seemingly identical training programs may have very different results in different organizational contexts or with different groups of learners: Workplace affordances (managerial support, peer cooperation, organizational learning culture) combine with variations in individual engagement to create learning experiences that are not entirely predictable from the content or instructional methods of the training program.

## *1.5.7.2 Informal Learning Theory*

### Characteristics of Informal and Incidental Learning

Marsick and Watkins (2017) have proposed a framework of how we can understand both types of workplace-based learning: informal intentional but outside structured programs versus incidental unintentional as byproduct. Informal Learning is characterized in their theory by the following features: It occurs within daily routines; it is prompted by an internal or external jolt,

not highly conscious, haphazard and affected by chance, it involves a process of reflection and action that uses induction to learn from experience. The characteristics of informal learning are clearly distinct from those for formal training approaches and Wofford et al., (2013) provides an empirical validation based on their study about aviation instructors: "The challenges experienced while trying to help students understand how things work provide opportunities [jolt] that cause instructors themselves to learn in the moment as they reflect upon (and are impacted by) what has just occurred. Research supports previous studies of catalysts, strategies and lessons learned associated with informal learning".

In contrast, daily work routines incorporate rather than segregate formal learning into specific training sessions or times, and it is initiated by jolts such as internal or external awareness raisers (such as new problems being encountered in practice; feedback about performance gaps compared with expectations for good outcomes of a task or activity; observations that other people are doing something better). Informal learning occurs less intentionally than formal learning because learners may not become aware that they have learned until after the fact, it happens at random times and is subject to chance events such as unplanned interactions or serendipitous findings over which training departments cannot exercise much control. Cofer (2000) confirms this definition, saying "informal workplace learning in daily experience" and reiterating a belief that effective work environments should be designed so they foster curiosity; remove barriers to learning; allow for humility [and] provide rewards for learning."

More importantly perhaps is that informal learning as a reflective practice constitutes an inductive cycle for thinking and doing in which learners build understanding from direct experience rather than abstract instruction; the experiential base of informal learning makes it especially relevant to workplace contexts where performance demands are complex, contextualized, dynamic, and ever-changing. English (1999) offers an example of this process as she studied how religious organizations develop understandings of "the Eucharist, church, [and]

leadership" in everyday parish experiences but also found that barriers exist such as interventions from the priest, history of leaders within the particular parish setting, and educational levels."

## Integration with Formal Training Approaches

Contemporary workplace learning theory sees a complementary relationship between these two modes of learning rather than competition: Marsick and Watkins assert that "formal and informal are integrated in effective organizational learning systems to create total development experiences designed for both performance on the job as well as career development" (2004, p. 6), citing empirical support from multiple sectors; Scott et al., who argue in their paper regarding technology-enhanced health professional training, state that "there is a growing recognition of Technology-Enhanced Learning (TEL) within healthcare professions education and 10 principles are identified to aid the evaluation of learning outcomes and retention in TEL programs" (2017), citing empirical evidence for mixed effectiveness when comparing traditional versus adult-learning-based academy training across various competency areas; Donohue & Kruis, who found that "findings suggest that a blended approach may offer optimal results for police recruits" with respect to the differences in outcomes between traditionally structured and adult-oriented academy-based policing curriculum (2020). Formal programs of training supply opportunities for acquiring foundational knowledge, developing specific skills, understanding organizational policies and procedures; deliver messages consistently throughout an organization; allow explicit knowledge transfer on a scale that would be difficult without them but are still not sufficient to develop the nuanced understandings, contextual judgments or adaptive expertise needed by most people in their jobs. Informal learning provides opportunities for applying abstract ideas within work situations, building tacit understanding through experience, refining skills through practice and feedback as well as adapting general principles to organizational contexts; formal training can provide conceptual frameworks that help make informal learning more effective, while the application of formally acquired knowledge can deepen understandings gained in traditional training.

Organizational Learning Culture

Organizational culture is critical for both formal and informal learning because it encompasses the values, norms, practices, and structures within an organization that enable or inhibit certain types of learning. Marsick and Watkins (2019) identified five dimensions of organizational learning culture related to its effectiveness: psychological safety; inquiry orientation; experimentation norms; knowledge sharing practice; continuous improvement commitments. Psychological Safety refers to conditions under which employees feel safe making mistakes, asking questions for clarification, seeking feedback on performance, or trying something new without being punished or shamed. Inquiry Orientation captures the extent to which an organization encourages questioning assumptions, challenging existing practices, considering alternative perspectives, and engaging in reflective dialogue about work processes and outcomes; organizations with strong inquiry orientations tend to create a rich environment for informal learning by normalizing curiosity and supporting exploratory activities that may not have immediate practical value. Experimentation Norms describes the extent to which an organization encourages risk-taking, innovation, or deviating from established procedures. Organizations with experimentation norms also provide environments conducive to informal learning because employees can test out new approaches, learn from mistakes, and find creative solutions for workplace challenges.

### 1.5.7.3 Training Transfer Theory

The Five-Stage Learning Process Model

A comprehensive model of how workplace learning translates into enhanced performance improvement was proposed by Griffin (2011) who describes his five-stage model as encompassing "a pre-learning stage, the trigger [need] for learning, the learning event, application of learning and impact on [the] learning." The significance of this transfer process is underscored when it is considered that millions of dollars are invested in continuing education

and training every year but some estimates suggest less than 10% of these investments results in performance improvements at work (Bryan et al., 2009). This five-stage model provides a structure for analyzing the conditions supporting or limiting learning transfer, as well as designing interventions to maximize the practical effects of training investment.

The pre-learning stage refers to the factors existing before formal learning events (e.g., learner characteristics, organizational context, job requirements, performance expectations) and their impact on learning readiness motivation capacity which are frequently ignored in training design but are important to predict effectiveness of training as well as identifying possible interventions required for maximizing optimal learning outcomes.

The trigger stage involves the catalysts that initiate learning activity, whether through recognition of performance gaps, encountering new job requirements, receiving feedback about current performance, or observing opportunities for improvement. Different types of triggers may require different learning approaches and understanding what triggers learning for different individuals or groups can inform training timing and design decisions.

A learning event is anything formal or informal that results in an acquisition of new knowledge (knowledge), skills (skills) or attitudes (attitudes). It can be a structured program, mentoring relationship, peer interaction, self-directed study or experiential opportunity; and its effectiveness depends on the content and design as well as how congruent it is with learner characteristics and organizational context set in earlier stages. The application stage refers to transfer of learning from the learning environment (learning) into actual performance situations within work environments (work). It has been noted that this is often a weak link, since research demonstrates repeatedly that most training does not produce sustained behavior change or performance improvement under real-world conditions.

The impact stage focuses on how learning impacts individual and team-level performance as well as organizational outcomes. Impact assessment involves longitudinal evaluation to determine whether learning resulted in sustainable improvements and benefits.

## Conditions for Effective Learning Transfer

Griffin (2014) points out in her model on conditions for transfer of knowledge from training to work settings: "Learning transfer does not occur automatically rather there are specific conditions which must be present if the learner is going to apply new knowledge and skills at work, these are known as facilitation conditions" (conditions that support learning transfer) that operate across several organizational levels. Research consistently shows how difficult it can sometimes be to ensure effective transfer (e.g., De Lorenzo & Abbott 2004). For instance: "In the military training environment an adult-learning model offers only a modest improvement in cognitive evaluation scores over traditional teaching, but statistical significance was noted for internal course grades and National Registry of Emergency Medical Technicians (NREMT) written scores but not for NREMT written pass rates," indicating that it is more complicated than we may think when new learning has to be applied. Some examples include individual-level conditions such as learner motivation to apply the learning, confidence in ability to perform new behaviors and perceived relevance or importance (in relation) of this type of training related to job performance; commitment for behavior change is another example that reflects individual level factors which can have impact on transfer of learning from training into practice [or at work]. In a study by Wilson (2005), empirical evidence was found suggesting "that although adult learners enrolled in an MBA degree program provided evidence of learning, andragogy did not influence this type of learning," but that "satisfaction with instructor and course" was influenced “by perception” regarding “andragogical teaching behaviors exhibited shown by faculty” also shown is the importance of characteristics beyond age, gender, and ethnicity in predicting learning outcomes: "characteristics (above and beyond age, sex, ethnic group) were found to be predictors for learning as well as satisfaction" which reflects that even individual-

level factors may influence transfer into application. A critical intermediate-level condition includes supervisor and peer support, which connects the individual level of conditions with organizational context; when supervisors model commitment to learnings, give practice opportunities, coach learners through feedback sessions or provide reinforcements following new behaviors in real-life situations; similarly, peers collaborating around work projects for example providing knowledge sharing, mutual encouragement may create social facilitation that keeps learning transfer alive after training has ended. Finally, at the organizational level are conditions such as systems (e.g., performance measurement systems which recognize improved performance), structures (resource allocation decisions supporting new behaviors), policies and culture elements that either support or constrain [constrain meaning limits] application.

## Evaluation and Continuity Mechanisms

Griffin's model acknowledges that continuous improvement processes are needed rather than one-time assessment activities to ensure effective transfer and that traditional training evaluations, which focus primarily on immediate reactions (e.g., satisfaction) and short-term learning outcomes (e.g., knowledge), do not measure longer-term behavior change or performance impact. For example, Dunst et al.'s 2010 meta-analysis of adult learning methods indicated all six adult learning method characteristics were associated with positive learner outcomes; however, "adult learning methods were most effective when 5 or 6 of the adult learning characteristics were used as part of instruction or training, and interventions were implemented by a small number (e.g., <30) of learners for more than ten hours on multiple occasions" underscoring how comprehensive evaluation can pinpoint what conditions maximize learning effectiveness.

Evaluation mechanisms should assess learning transfer at multiple time points to understand both immediate application and sustained behavior change. Early assessment identifies implementation barriers and provides opportunities for corrective intervention, while

longer-term evaluation determines whether learning has produced lasting improvement and organizational value.

Continuity mechanisms ensure that learning remains active and relevant over time rather than fading due to lack of reinforcement or changing job requirements. These mechanisms may include refresher training, peer learning networks, mentoring relationships, performance coaching, and integration of learning objectives into ongoing performance management processes.

The evaluation and continuity emphasis recognizes that learning transfer is not a discrete event but an ongoing process that requires sustained organizational support and attention. This perspective aligns with broader workplace learning theory by acknowledging that effective learning is embedded in work systems rather than isolated in training programs.

### 1.5.8 Theoretical Integration and Implications

The combination of these three theoretical frameworks into a holistic framework provides an overarching structure for understanding expectation effects within organizational training settings and how they can be harnessed in order to optimize learning. For instance, team science training has shown that "approximately 85% of the qualitative data could be connected to at least one andragogical principle" (Knapke et al., 2024) with participant feedback being largely positive regarding readiness to learn and problem-based learning orientation; a research synthesis by Trivette et al. (2009) indicated that "adult learning methods and practices where learners were actively engaged in acquiring, using, evaluating, or reflecting on new knowledge or practice had the most favorable impact" supports this integrated approach.

Workplace Learning Theory (Wagner and Sternberg, 2007) states that learning effectiveness is a dynamic interaction between organizational affordances provided for the

learners, and individual engagement of the learner with those afforded opportunities. Expectation effects could therefore be working by increasing both the quality of affordances offered to students in different ways through positive expectations about outcomes on instructors or supervisors (e.g., providing more robust opportunities for learning) as well as engaging in more personal support during learning (providing more individualized assistance), and encouraging learners to try out new ideas and explore areas beyond what is currently known. There was evidence of this mechanism from the Parent-Nichols et al. (2020) study, which indicated statistically significant differences on certain questions pertaining to the Individual Recovery competency area for ALT applied in teacher training; however overall "ALT applied to teacher in-service did not impact transfer of learning immediately post-training compared with a traditional.

Informal learning theory shows that much workplace learning happens informally through daily work experiences, peer interactions, problem-solving activities (Chyung 2007), suggesting expectation effects may have the most effect via informal mechanisms rather than formal training content. In her study of contract learning, Chyung found "students felt more self-directed and motivated during contract learning" because they could select assignments that were relevant to their interests and needs," yet surprisingly, students' online behavior was not a predictor for motivational status."

Accordingly, training transfer theory emphasizes the notion that true measures of the effectiveness of training ultimately rest on its application in work settings rather than immediate outcomes of training and suggests that expectation effects might be most significant at these latter stages of learning when supervisors support, peer encouragement, and organizational reinforcement determine whether training results produce sustained performance improvement. In fact, Morris (2019) notes this long-term perspective arguing "longitudinal studies which look more holistically into educational solutions that address self-directed learning competency

development over a longer time period will help avoid the potentially recurring problem whereby education programs regress back to traditional teacher directed models."

Collectively, these theories lay out how pedagogical processes in organizational training contexts establish the conditions under which expectation effects can improve learnings results. Research also supports this theoretical integration by showing that "institutions using andragogical strategies achieve better learning performance," organizations integrating adult-learning frameworks into their training programs report higher productivity and employee engagement, and "higher education institutions employing flexible, technology-based, or mentorship-oriented models demonstrate increased retention and satisfaction among nontraditional learners" (Oshame & Maureen 2023), which indicates that systematically applying these theoretical frameworks produces the right conditions for expectation effects to enhance learning processes as well as organizational outcomes.

## 1.6. Mediating and Moderating Variables

### 1.6.1. The Expectation Effect: Current Understanding and Ongoing Challenges

The expectation effect, a well-documented phenomenon in various interpersonal relationships, continues to be a subject of intense research. However, there is still a pressing need for a comprehensive explanation of the exact process that triggers this effect. The identification of the mediating variables that underpin the expectation effect remains a key focus for many scholars (Eden, 1990; Jussim, 1986; Sutton, 1986).

Over the past few decades, several theoretical models have been proposed to explain the mechanism of the expectation effect (Braun, 1976; Brophy & Good, 1970; Darley & Fazio, 1980; Eden, 1984). Sutton (1986) proposed an integrated model that combines components shared by most of these models and specifically addresses work organizations.

Recent studies have further explored the mediating variables involved in the expectation effect. Recent studies have further explored the mediating variables involved in the expectation effect. Vîslă et al. (2018) demonstrated that the quality of therapeutic alliance mediates the relationship between patients' initial outcome expectations and their post-treatment outcomes in group cognitive-behavioral therapy. MacKinnon, Fairchild, and Fritz (2019) provided a detailed examination of mediation analysis, emphasizing the distinctions between mediators, confounders, moderators, and covariates in psychological processes. Ruvalcaba-Romero et al. (2017) explored how positive emotions, self-esteem, interpersonal relationships, and social support mediate the relationship between emotional intelligence and life satisfaction. Lemay and Venaglia (2016) reviewed the impact of relationship expectations on interpersonal relationships, revealing that positive expectations generally correlate with enhanced relationship quality, persistence, and positive behaviors. Ray-Yol and Altan-Atalay (2020) examined the mediating

role of negative mood regulation expectancies in the link between interpersonal emotion regulation and psychological distress.

### 1.6.2. Key Issues in the Integrated Model:

Based on Sutton's integrated model, which forms the theoretical basis for the present research study, two key issues emerge:

1. The relationship between superiors' expectations (in this case, instructors) and their subordinates' performances.
2. The mediating variables through which superiors' expectations are translated into their subordinates' behavior.

The following sections will explore these issues in greater detail, incorporating insights from recent research to contribute to a more comprehensive understanding of the expectation effect and its underlying mechanisms in organizational settings.

### 1.6.3. The Self-Efficacy Prophecy Model in the Present Experiment

The superiors' expectations are the second link in the chain. In the Pygmalion paradigm, the expectations are experimentally manipulated, and all the rest are neutralized on the initial level through random placement. Once the superior's expectations regarding their subordinates and their performances are shaped, they influence the superiors' behavior towards their subordinates, their leadership, and their support of them. The superiors' expectations are conveyed to the subordinates by various behaviors that influence their self-efficacy and their achievements. It is crucial to understand that the target behavior constitutes feedback both for their self-expectation and the perceiver's initial expectations. The circle begins anew with self-feedback, highlighting the continuous nature of this process. This relationship was not examined in the present experiment.

### 1.6.4. Leadership

Since its inception, different models have been developed for understanding what makes an effective organizational leader. Various models and approaches have emerged to explain its complexities and impact on organizational dynamics, but one of the most comprehensive definitions was given by Bons (1985), who defined it simply: "Organizational leadership is a process whereby people are influenced to accomplish organization goals." Bons (1985) provided a foundational definition of organizational leadership as 'a process in which the leader influences the people to achieve the goals of the organization. This definition encapsulates the essence of leadership as guiding and inspiring others towards common objectives, instilling a sense of inspiration and motivation in the audience.

The impact of leadership extends far beyond the immediate organizational context. As Banaszak (2006) astutely observes, managers, with their educational background, professional paths, and place in the social structure, constitute a social category that strongly influences culture, lifestyle, and the actual shape of economic and social relations. This perspective underscores the significant role of leadership in shaping societal dynamics, emphasizing its responsibility for organizational success and broader societal development.

A growing recognition of the importance of expectations in leadership effectiveness has marked the evolution of leadership theory. Seminal studies by Likert (1961), Livingstone (1969), and Bass (1985) have consistently emphasized the crucial role of conveying high expectations from managers to their subordinates as a key component of effective, charismatic, and transformational leadership. This body of research suggests that leaders who communicate high expectations to their team members are likelier to inspire superior performance and foster a culture of excellence within their organizations.

Eden (1993b) extended this idea into an active model of Pygmalion leader behavior that assumes managers expect good performance from subordinates, use a more effective leadership style in such instances (the Pygmalion leadership pattern), which results in improved subordinate performance but can also result in the failure of those for whom poor performance is expected. The implications of this theory about self-fulfilling prophecies and leader expectations are powerful: They have to do with how a manager relates to his or her subordinates, as well as with what kind of an organizational climate he or she helps create.

The mechanisms through which expectations influence performance were elaborated by Rosenthal (1973), who proposed four mediating variables: socio-emotional climate, feedback, input, and output. The socio-emotional climate refers to creating a warmer, more supportive, and friendlier atmosphere towards individuals from whom more is expected. Feedback involves providing more considerable and varied input to those with higher expectations. Input relates to the greater amount and difficulty of material presented to high-expectation individuals, while output refers to the increased opportunities for response given to these individuals. These factors closely align with task-oriented and people-oriented behaviors identified by organizational psychologists as measures of leadership (Halpin & Winer, 1957; Bowers & Seashore, 1966).

Upon these foundations Fishbein (2021) has developed a Humane Leadership model that is empirically validated in terms of 21st-century leadership at the workplace. The implication here was an executive manager who would focus on task completion regardless of how he or she treated employees sent out the message that subordinates were less important than tasks and human relations as well as organizational success suffered because of this. However, Humane Leadership suggests a balance is needed where although it may be appropriate to prioritize certain aspects of completing your work requirements while not personally tending to your team members will contribute negatively toward building healthier teams.

The Humane leadership model developed by Fishbein (2021) combines several traits needed for successful human-centered leaders. For example, visionary leader is one characteristic that has been identified as part of effective leadership since the time of Plato (Coers 2018), defined today as having an ability to see future trends and think several steps ahead with foresight so they can plan actions based on their insight into the process or outcomes, analyze situations continuously, constantly assess processes and results for planning follow-up strategies, and use that forward-looking approach in guiding organizations through complex business environments (Bass & Avolio 1994; Covey et al. 2014).

This model, as described by Fishbein (2021), integrates several essential traits for successful leadership, including:

1. Visionary leadership (Coers, 2018; Bass & Avolio, 1994; Covey et al., 2014)
2. Action-taking (Wanasika, 2009; Rowe, 2001; Hitt & Ireland, 2005)
3. Clear goal setting (Rowe, 2001)
4. Realism (Brzezińska, 2020)
5. Clear communication (Hoch, 2014)
6. Perseverance (Kirkpatrick and Locke, 1991; Bass, Stogdill & Bass, 2008)
7. Negotiation skills (Mansbridge, and Martin, 2015)
8. Role modeling (Kirkpatrick and Locke, 1991)
9. Kindness (Haskins, Thomas, and Johri, 2018)

Fuchs et al. (2024) highlighted psychological flexibility as a key component of effective 21st-century leadership, finding strong correlations between flexibility components and crucial leadership traits. Fuchs & Banaszak (2024) emphasize the importance of considering multiple dimensions of authority:

- Formal Authority - Derived from one's position in the organizational hierarchy, formal authority provides leaders with the official power to make decisions and direct resources.
- Informal Authority - Built through trust, respect, and interpersonal relationships, informal authority allows leaders to influence beyond their official mandate.
- Emotion-Based Authority - This form of authority is established through the leader's ability to manage and influence emotions within the team.

Fuchs et al. (2023) argue that effective leaders must balance these different forms of authority to create positive organizational cultures and maximize team performance. Their research indicates that leaders who successfully integrate these forms of authority are more likely to inspire trust, foster innovation, and achieve superior organizational outcomes.

Action-taking is another crucial trait of effective leaders. Wanasika (2009) and Rowe (2001) describe these leaders as strategic, with the ability to anticipate, envision, maintain flexibility, think strategically, and collaborate with others to initiate changes that create a viable future for the organization. This definition encompasses several key characteristics: future orientation, cognitive ability, big-picture thinking, interpersonal relations, propensity to act, and risk-taking (Hitt & Ireland, 2005, in Wanasika, 2009). Leaders who embody these traits are better equipped to navigate the challenges of modern business landscapes and drive their organizations toward success.

One essential aspect of leadership involves setting clear objectives; that is, effective leaders can distinguish between what is relevant (and irrelevant) for achieving results and define operational goals so their team knows where to aim. (Rowe, 2001, Wanasika, 2009). These are cognitively complex enough to hold both short-term goals at the same time as long-range goals

but do not have conflicting goals, which ensures that they instill a sense of direction in an audience.

Banaszak (2023) points out that modern societies, apart from advanced modernization and globalization processes, are characterized by the professionalization of management. This trend underscores the importance of developing comprehensive leadership skills, including realism, clear communication, and perseverance. Comprehensive leadership skills include strategic thinking, adaptability, and inspiring and motivating others. As an essential trait of effective leaders, realism is characterized by Brzezińska (2020) as the ability to set goals that arise from necessities rather than desires and dreams. Such leaders operate rationally, make logical choices, and justify their decisions and actions based on practical considerations rather than wishful thinking.

Clear communication is not just vital for leadership success; it is the cornerstone of effective leadership. Hoch (2014) refers to leaders who provide clear instructions as pragmatic leaders. These individuals offer precise guidance about team procedures and working methods, ensuring that team members understand their roles, responsibilities, and the organization's overall direction. The ability to communicate effectively is a skill that every leader must master, providing the audience with a sense of being well-informed and guided.

Perseverance is a hallmark of effective leadership. Kirkpatrick and Locke (1991) note that leaders who exhibit this trait are better at overcoming obstacles and can work with distant objectives in view. They adhere to the mission and are passionate about seeing projects through to completion (Bass, Stogdill & Bass, 2008). This tenacity and commitment to long-term goals enable leaders to guide their organizations through challenges and setbacks, maintaining focus on ultimate objectives.

The ability to negotiate persuasively, role model effectively, and lead with kindness are crucial leadership skills. Foster, Mansbridge, and Martin (2015) emphasize the importance of understanding different perspectives and seeking fair negotiation agreements. Kirkpatrick and Locke (1991) highlight the power of role modeling in influencing others, demonstrating that leaders who embody the values and behaviors they expect from their team members are more likely to inspire similar conduct in their subordinates. Haskins, Thomas, and Johri (2018) underscore the fundamental importance of kindness in leadership for organizational well-being, suggesting that leaders who demonstrate genuine care and concern for their employees foster more positive and productive work environments.

Banaszak (2023) observes that managers often need to appreciate the knowledge included in economic theories and theories of organization and management. This insight suggests a need for better integrating theoretical knowledge and practical application in leadership development programs. It highlights the importance of bridging the gap between academic research and real-world leadership practices to enhance effectiveness.

Honesty, integrity, active listening, and strong interpersonal skills are especially significant for leaders. Kirkpatrick and Locke (1991) assert that these qualities form the foundation of a trusting relationship between leaders and followers. Leaders who embody these traits are loyal to superiors and subordinates, adhere to organizational policies, nurture the organizational culture, and refrain from abusing their position of authority or power (Smith et al., 1986). These qualities create a positive organizational culture and foster trust among team members.

The ability to delegate, commit to lifelong learning, nurture staff, and maintain a positive attitude are key leadership traits. Alčauskienė, Vitkienė, and Grigaliūnienė (2019) note that a delegating leadership style instills confidence and inspires innovation among team members. By entrusting responsibilities to their subordinates, leaders distribute workload and provide

opportunities for growth and development. Garman et al. (2006) emphasize the importance of professionalism and continuous learning, highlighting that effective leaders are committed to their growth and development and that of their team members. Jones and Leonard (2009) stress the value of nurturing and developing team members, recognizing that investing in employee growth contributes to overall organizational success. Hurduzeu (2015) highlights the importance of maintaining a positive outlook, even in challenging situations, as leader positivity can significantly influence team morale and resilience.

Recent studies have explored the impact of superiors' expectations on subordinates' behavior, leadership styles, and self-efficacy within organizational settings. This body of research builds upon the foundational Pygmalion paradigm, where the expectations set by superiors play a crucial role in shaping subordinates' performances and behaviors. Newman et al. (2018) investigated the role of entrepreneurial leadership in enhancing employees' creative self-efficacy (CSE) and innovative behavior. Their study found that employees working under strong entrepreneurial leaders exhibited higher levels of innovative behavior, particularly when they possessed high creative self-efficacy.

In a cross-cultural context, Gumah et al. (2021) explored the influence of leadership styles on foreign teachers' self-efficacy in China. The study revealed that transactional and transformational leadership styles positively impacted self-efficacy by shaping the nature and quality of feedback provided by leaders. This research highlights the importance of considering cultural context in leadership studies and the potential for leadership styles to influence employee self-efficacy across different cultural settings.

Kim et al. (2014) focused on the effects of transformational, transactional, and servant leadership styles on subordinates' self-leadership and organizational effectiveness. The study concluded that transformational and servant leadership styles significantly promoted self-leadership among employees, which subsequently led to higher organizational commitment and

citizenship behavior. These findings underscore the importance of leadership approaches that empower and inspire employees to take initiative and responsibility for their performance and development.

Yon (2015) examined how supervisor-subordinate relationships (SSR) influence employee responsibility behavior. The study identified role-based self-efficacy as a significant mediator in this process, emphasizing the role of supervisors in shaping subordinates' self-perceptions and responsible behaviors. This research highlights the importance of positive supervisor-subordinate relationships in fostering employee responsibility and performance.

Li et al. (2020) explored the concept of paradoxical leadership and its impact on employee voice behavior. Their research demonstrated that paradoxical leadership positively influences both promotive and prohibitive voice behaviors through the mediating effects of self-efficacy and psychological safety. This study introduces a new dimension to leadership research, suggesting that leaders who can effectively manage seemingly contradictory demands may be particularly effective in encouraging employee voice and participation.

The interplay between gender and leadership style has been a subject of significant research. Eagly and Johnson (1990) conducted a meta-analysis of 162 research studies on leadership and gender. They concluded that it is necessary to re-examine the outlook that women and men lead similarly. They found that men tend to have a task-oriented leadership style when their role is perceived as masculine, and women tend to be task-oriented, even more than men when their leadership role is perceived as feminine. This research raises important questions about how gender influences leadership behaviors and the expression of expectations, suggesting that the perception of leadership roles as masculine or feminine may significantly impact leadership styles.

Banaszak (2011) emphasizes the importance of looking beyond traditional academic forms of education when considering managerial education. He argues that we must analyze the place and role of managers, masters, and even media in forming managerial identities and personalities and their professional competencies. This perspective aligns with the multifaceted nature of leadership development proposed in the Humane Leadership model and underscores the complexity of leadership development in modern, globalized societies.

Banaszak (2006, 2011) further argues that education is particularly important for creating and changing social structures in managers' cases. He points out that in this group, the importance of extra-educational factors, such as economic inheritance, social inheritance, and social capital, often takes precedence. This perspective underscores the complexity of leadership development and the need for comprehensive approaches considering both formal education and practical experience. Effective leadership development programs should incorporate various experiences and influences beyond traditional classroom learning, including mentorship, practical application, and exposure to diverse perspectives and challenges.

In conclusion, the Afik Model of Humane Leadership, encompassing task- and relationship-oriented traits, provides a comprehensive framework for effective leadership in the 21st-century workplace. As organizations continue to evolve in an increasingly complex global economy, the need for leaders who can adapt, inspire, and nurture their teams while driving organizational success will only grow in importance. The Humane Leadership model, considered alongside Banaszak's insights on the social and educational factors influencing leadership development, offers valuable guidance. It reassures us about the comprehensive nature of the model, emphasizing the balance between operational skills and interpersonal abilities critical for navigating the challenges of modern organizational environments.

The collective body of research on leadership underscores the critical role of superiors' expectations and leadership styles in shaping subordinates' behavior and organizational

outcomes. It highlights the complex interplay between leadership, expectations, and employee responses, suggesting that effective leadership is crucial for fostering a productive and engaged workforce. The various studies reviewed demonstrate that leadership is not a one-size-fits-all concept but rather a complex and multifaceted phenomenon that requires careful consideration of individual, organizational, and cultural factors.

As we move forward, it is clear that further research is needed to explore these dynamics in different cultural and organizational contexts. This will provide a more comprehensive understanding of leadership effectiveness and address potential gender differences in leadership and expectations. Additionally, integrating emerging concepts such as paradoxical leadership and the role of technology in shaping leadership practices presents exciting avenues for future research and practice.

Ultimately, the goal of leadership research and development should be to create more effective, inclusive, and sustainable organizational environments. By understanding the complexities of leadership and its impact on individuals and organizations, we can develop better strategies for cultivating leaders who can navigate the challenges of the modern business world while fostering the growth and well-being of their team members. As we continue to face unprecedented global challenges and rapid technological change, the importance of effective, humane leadership cannot be overstated. Through such leadership, organizations can survive and thrive in an increasingly complex and interconnected world.

### 1.6.4. Self-Efficacy

"If you believe, you can achieve." This quote from American basketball coach Jeff Van Gundy encapsulates the essence of self-efficacy. He once used this principle to explain how his team, the New York Knicks, reached the NBA playoff finals, despite being considered inferior and having low chances of meaningful achievements that year.

Self-efficacy is the individual's belief in his ability to organize and carry out actions required to achieve the desired outcomes (Bandura, 1986). This concept is central to Bandura's learning theory (1977, 1982, 1984). He defines it as "people's judgments of their capabilities to organize and execute courses of actions required in coping with future situations." This perception mediates between the individual's knowledge of the environment, the coming task, the skill necessary to perform it, and the person's behavior and actions. This is the first and foremost factor that influences motivation and actual performance since the individual's expectations about his ability to carry out a task are important in the chances of success. It is possible to predict that the individual will perform certain behaviors out of a range of possible behaviors when he expects and believes that he can carry out the task and that the performance will lead to the hoped-for outcomes.

Recent research has validated and expanded upon Bandura's original framework, demonstrating the broad applicability of the concept of self-efficacy. It has been successfully applied to diverse fields such as exercise adherence (Nolan & Hallam, 2018), language learning (Agung, Siboro & Quinones, 2022), psychiatric care (De Las Cuevas & Peñate, 2015), and substance abuse recovery (Supriyanto & Hendiani, 2018).

According to Bandura (1986, p. 391), self-efficacy does not address the individual's skills but his evaluation of his ability to perform behaviors through these skills. There is a difference between the evaluation of personal self-efficacy and the expectations regarding the behavior-result relationships. Perceived self-efficacy is defined as the individual's assessment to achieve a certain level of performance. At the same time, the expectations regarding the result are an appraisal of the results of this behavior.

A large part of the variance in people's behaviors and achievements is explained through the concept of self-efficacy. This stems primarily from people seeing the results as closely related to their performances. Therefore, those who perceive themselves as having high self-efficacy

will expect positive results. In contrast, individuals who are less confident in their ability will expect unimpressive performance levels and, consequently, insufficient outcomes. Thus, how the individual perceives his self-efficacy will influence the choice of his ways of behavior; self-efficacy has an impact not only on the choice of the individual's ways but also on his expectations about the outcomes of the behavior in the way in which high self-efficacy will yield the expectation for good outcomes, and the reverse also holds.

According to Bandura (1977), the concept of self-efficacy is composed of three dimensions: magnitude, strength, and generality. These dimensions play a crucial role in shaping an individual's belief in their ability to perform certain tasks:

1. Magnitude

The individual's judgment about his self-efficacy can be delineated by simple goals or encompass the most complex tasks. Between these extremes, the individual may encounter all levels of difficulty in the same field of functioning. This dimension will determine whether the individual engages in a certain activity or avoids it.

2. Strength

The individual's degree of willingness to continue his efforts to achieve the goal, even if he encounters difficulties. As self-efficacy is perceived as higher, it is reasonable for the individual to persevere more in his efforts to achieve the goal and even choose more challenging tasks. Hence, his chances for successful performance will increase.

3. Generality

Does the perceived efficacy address only a defined area, or is it generalized to different activities and situations? According to Bandura (1986), individuals whose responses are commensurate with the changing circumstances tend to see their behavior as a function of

situational events and pressures. The behavior must be consistent beyond situations, especially because the individual learns to respond in a way required by certain circumstances, according to previous experiences. Thus, the individual acts according to a scenario he has experienced (Anderson, 1983). Hence, efficacy will be generalized to situations that yield similar outcomes and require similar behaviors (Aviram, 1990).

Self-efficacy is a trait based on social learning, according to which the person builds his expectations regarding his ability to behave in different ways in different situations.

Bandura (1986) identified four primary sources through which perceptions of self-efficacy regarding certain behaviors develop. These sources, in descending order of degree of importance, are:

1. Performance accomplishments: Experience in successfully or unsuccessfully performing the task in the past: This is the most influential source, based on personal experiences of success or failure in task performance.
2. Vicarious experience: Observation of others' behavior serves as a model for the individual; this involves observing others' successful performances, which can raise the observer's beliefs about their capabilities.
3. Verbal persuasion: Verbal persuasion of the individual from a source perceived by them as believable. This includes encouragement from others, particularly from sources perceived as credible by the individual.
4. Physiological states: Individuals' judgment of their physiological state (e.g., anxiety, stress) can influence their self-efficacy beliefs.

Maddux (1995) added another two sources:

1. Imaginary experience: The individual's imaginary experience and the individual's assessment of their emotional state.

2. A general perception of emotional strength: Access to information sources will influence self-efficacy's magnitude, strength, and generality. As the individual successfully performs a broader range of behaviors, a general perception of his ability's forms in him, generalized to different situations and tasks.

Bandura (1980) maintained that self-efficacy may be a factor that predicts a certain activity, regardless of the way in which it is acquired. In addition, Bandura (1982) showed that self-efficacy can serve as a predictive factor in different areas when the examined self-efficacy is related to the performed activity.

Many research studies (Bandura & Shunk, 1981; Barling & Beatie, 1983; Locke et al., 1984) reinforced this finding and showed that self-efficacy was found to be the strongest predictive factor regarding the performance of tasks in the future. Self-efficacy has emerged as a crucial concept in psychological and educational research due to its significant impact on human behavior, motivation, and achievement. Its importance is evident in several key areas:

1. Predictive Power: Bandura (1982) demonstrated that self-efficacy can be a strong predictive factor across various domains when specifically related to the activity being performed. Numerous studies (e.g., Bandura & Shunk, 1981; Barling & Beatie, 1983; Locke et al., 1984) have reinforced this finding, showing that self-efficacy is often the strongest predictor of future task performance. This insight equips professionals with the knowledge to prepare for and enhance future performance.

2. Influence on Behavior and Achievement: A large part of the variance in people's behaviors and achievements can be explained through the concept of self-efficacy (Bandura, 1986). This is primarily because individuals tend to see results as closely related to their performances, leading those with high self-efficacy to expect positive outcomes and vice versa.

3. Educational Applications: Self-efficacy has been shown to significantly impact students' learning processes and outcomes in education. For instance, Agung, Siboro and Quinones (2022) explored how variations in self-efficacy influence students' confidence and performance in public speaking classes.

4. Clinical Relevance: The concept has proven valuable in clinical settings. De Las Cuevas and Peñate (2015) validated the General Self-Efficacy Scale (GSE) in psychiatric outpatient care, confirming its utility in predicting treatment adherence and outcomes.

5. Health Behavior: In health psychology, self-efficacy has been identified as a key factor in promoting positive health behaviors. Nolan and Hallam (2018) developed the Exercise Self-Efficacy Scale (ESE-S), demonstrating the importance of self-efficacy in predicting adherence to physical activity routines.

6. Substance Abuse Recovery: Supriyanto and Hendiani (2018) highlighted the critical role of self-efficacy in supporting recovery efforts and preventing relapse among individuals recovering from drug addiction.

Frequently, a differentiation is made between trait self-efficacy, or self-efficacy as a stable and constant trait that people have, and state self-efficacy, which changes in the person from situation to situation. Eden and Kinnar (1991) indicated the benefit of the differentiation between trait self-efficacy and state / specific self-efficacy and recommended seeing them as two separate theoretical constructs.

Recent research has expanded upon Bandura's original framework, particularly exploring the dimensions of self-efficacy—magnitude, strength, and generality. Nolan and Hallam (2018) developed and validated the Exercise Self-Efficacy Scale (ESE-S), demonstrating the importance of these dimensions in predicting adherence to physical activity routines. This scale measures the

strength of individuals' confidence in their ability to maintain exercise behaviors under challenging conditions, the generality of these beliefs across different contexts, and the magnitude of their self-efficacy across varying difficulty levels (Nolan & Hallam, 2018).

Agung, Siboro and Quinones (2022) further explored these dimensions in the context of language learning, assessing self-efficacy among students in speaking classes. The study highlighted how variations in self-efficacy across the dimensions of magnitude, strength, and generality influence students' confidence and performance in public speaking (Agung, Siboro & Quinones, 2022). Similarly, De Las Cuevas and Peñate (2015) validated the General Self-Efficacy Scale (GSE) in psychiatric outpatient care, confirming its utility in predicting treatment adherence and outcomes. This study emphasized the scale's reliability in assessing self-efficacy's strength and generality dimensions, particularly in clinical populations (De Las Cuevas & Peñate, 2015).

In the context of substance abuse recovery, Supriyanto and Hendiani (2018) assessed self-efficacy among individuals recovering from drug addiction. Their research highlighted the critical role of self-efficacy in supporting recovery efforts and preventing relapse, underscoring the importance of interventions to strengthen individuals' beliefs in their ability to overcome addiction (Supriyanto & Hendiani, 2018). Yudhistira et al. (2021) provided further validation of the General Self-Efficacy Scale (GSES), demonstrating its efficacy in measuring self-efficacy across the dimensions of magnitude, strength, and generality in diverse populations (Yudhistira et al., 2021). The findings from these studies collectively underscore the significance of self-efficacy as a predictor of performance and behavior across various domains. Self-efficacy not only influences individuals' choices of activities and their persistence in the face of difficulties but also impacts their emotional reactions and overall sense of well-being. Understanding the dimensions of self-efficacy and the factors that enhance or undermine it can inform interventions designed to boost individuals' confidence and improve their outcomes in different areas of life.

### 1.6.5. Trait (General) Self-Efficacy

As Bandura (1986) conceptualized, self-efficacy refers to an individual's belief in their ability to organize and execute the actions required to manage prospective situations. Gist (1987) and Eden and Aviram (1993) highlighted that trait self-efficacy may be associated with the Pygmalion effect, wherein the persuasive influence of others who hold positive expectations can enhance an individual's performance. This connection suggests that individuals' belief in their ability to perform tasks can be significantly shaped by the expectations and beliefs communicated by those around them. Specifically, when leaders convey high expectations, this can enhance subordinates' self-efficacy, potentially leading to better performance.

Research in the late 1990s and early 2000s, including Schunk (1995) and Stajkovic and Luthans (1998), provided strong empirical support for the relationship between self-efficacy and performance across various contexts. These studies demonstrated that self-efficacy is a critical determinant of work-related performance and learning outcomes. Bandura's (1997) comprehensive work elaborated on how self-efficacy affects behavior, offering foundational insights relevant across different fields, including organizational behavior.

Eden (1984) posits that leadership is a critical component in organizations, key in guiding members toward success. Subordinates' belief in their leaders' ability to lead them effectively is a significant factor in their self-evaluation of efficacy. This belief can act as a motivator, encouraging employees to undertake challenging tasks with the expectation of achieving successful outcomes. Leaders who communicate high expectations and demonstrate confidence in their subordinates' abilities can significantly enhance their self-efficacy, fostering improved performance and resilience.

Subsequent studies, such as Judge and Bono (2001) and Luthans, Avolio, and Avey (2007), explored the role of self-efficacy within the broader concept of psychological capital.

These studies highlighted the impact of leaders' self-confidence on their effectiveness and the performance of their followers. They reinforced the importance of self-efficacy in leadership and organizational success and also demonstrated how leader confidence and skills influence follower self-efficacy and performance, further emphasizing the role of leadership in shaping team outcomes.

Nolan and Hallam (2018) developed and validated the Exercise Self-Efficacy Scale (ESE-S), which measures self-efficacy across the dimensions of magnitude, strength, and generality. Their findings suggest that these dimensions are crucial in predicting adherence to physical activity and, by extension, can be applied to organizational settings to predict task adherence and success (Nolan & Hallam, 2018).

Agung, Siboro and Quinones (2022) explored self-efficacy among students in speaking classes, demonstrating that variations in self-efficacy influence students' confidence and performance. This research supports the idea that positive reinforcement from authority figures, such as teachers or organizational leaders, can enhance self-efficacy and performance in various domains.

Similarly, De Las Cuevas and Peñate (2015) validated the General Self-Efficacy Scale (GSE) in a clinical setting, demonstrating its utility in predicting treatment adherence and outcomes, reinforcing the importance of confidence in one's abilities as a predictor of success.

In the context of substance abuse recovery, Supriyanto and Hendiani (2018) assessed self-efficacy among individuals recovering from drug addiction. Their research highlighted the critical role of self-efficacy in supporting recovery efforts and preventing relapse, underscoring the importance of interventions aimed at strengthening individuals' beliefs in their ability to overcome addiction.

Yudhistira, Deasyanti and Muzdalifah (2021) provided further validation of the General Self-Efficacy Scale (GSES), demonstrating its efficacy in measuring self-efficacy across the dimensions of magnitude, strength, and generality in diverse populations.

These studies collectively underscore the critical role of self-efficacy as a predictor of performance and behavior across various domains. Self-efficacy not only influences individuals' choices of activities and their persistence in the face of difficulties but also impacts their emotional reactions and overall sense of well-being. Therefore, understanding the dimensions of self-efficacy and the factors that enhance or undermine it is crucial. It can inform interventions designed to boost individuals' confidence and improve their outcomes in different areas of life

In our research, the service representatives who will participate in the training courses and be present at our research intervention will attend the training course after a classification process that checks prior customer service positions and working experience in the field. Regardless of their prior experience, they will be guided through a comprehensive course by an instructional staff with extensive experience in the field, who will introduce them to a new and unfamiliar professional world with many professional terms.

Given these factors, there is a reasonable basis to assume that the representatives will perceive the staff of lecturers as a reliable source, experts in all that pertains to professional and service-oriented clarifications and ways of resolving problems that arise. This perception can significantly influence their future performance in the course setting and beyond, as they will be more likely to apply the skills and knowledge gained from the training courses in their professional roles.

Furthermore, the learning interaction of a completely new content world that requires a variety of skills that must be achieved in a relatively short period of time is appropriate to be included in a category that Bandura (1986) called high uncertainty. As the level of uncertainty

about the task requirements and the individual's ability relative to the performance is higher, the importance that the individual ascribes to external sources of information is higher. In this context, the instructors' high expectations play a crucial role in shaping the representatives' perception of their self-efficacy relative to their performances during and even after the course.

### 1.6.6. The Second Research Hypothesis

Therefore, the second hypothesis (hypothesis no' 2) is that the increase of the expectations among the supervisors positively influences the trait self-efficacy. The prediction derived from this hypothesis is that the planting of high expectations among the instructors will improve the sense of trait self-efficacy among the representatives.

### 1.6.7. Behavioral Plasticity Predicts Work Adjustment

Different research studies in the field of organizational behavior present confirmation of the "behavior shaping hypothesis" about the way behavioral plasticity predicts work adjustment among newcomers, which is directly relevant to the concepts of behavioral shaping and self-esteem in organizational contexts (for example, Korman, 1966; Weiss & Knight, 1980; Cai et al., 2015; Saks & Ashforth, 2000), according to which individuals with low self-esteem tend to be more influenced by the information directed to them, especially social information, in comparison to workers with high self-esteem. Recent studies have also linked this hypothesis to social identity theory and the concept of 'identity validation.' These studies, which used a variety of research methodologies including surveys, experiments, and case studies, showed how individuals with lower self-esteem are more sensitive to environmental cues. They delve into how identity verification influences different dimensions of self-esteem, including worth-based and efficacy-based esteem (Stets & Burke, 2014). Brokner (1988) collected data supporting the hypothesis of behavioral plasticity, which states that workers with high self-esteem are more confident in their abilities to carry out tasks in different fields and environmental contexts based

on their evaluation of their learning history. Hence, they tend to be less influenced by information and mainly social information directed to them than workers with low self-esteem. In their comprehensive review, Pierce and Gardner (2004) discuss how self-esteem formed around work experiences significantly influences employee motivation, work-related attitudes, and organizational behaviors.

While the behavior shaping hypothesis has been confirmed by various studies, there is still much to explore. For instance, individuals with low trait self-efficacy were found to have low certainty about their performance abilities in different situations. Brokner relied on the social comparison theory of Festinger (1954), which maintains that individuals lacking information about objective reality rely on social hints that influence their thoughts, emotions, and actions. Banjo (1993) and Dvir, Eden, and Banjo (1995) examined trait self-efficacy as moderating the influence of the supervisors' expectations on the subordinates' performance while referring to gender differences.

Although their hypothesis was not confirmed, the researchers recommended directing future resources to investigate this variable considering other findings that confirmed the behavior shaping hypothesis. In continuation of this recommendation. Natanovitz (2000) studied this hypothesis and maintained on PERACH project. PERACH, meaning flower in Hebrew, is a national program for social support. The word is an acronym in Hebrew for mentoring project. PERACH pairs children from underprivileged backgrounds with university students who act as their mentors. The care that PERACH children receive from their mentors helps them realize their potential and blossom into motivated individuals. Natanovitz (2000) study reveal that although the hypothesis was not confirmed regarding the moderating role of trait self-efficacy and the moderating role of domain self-efficacy, these variables were influenced by manipulation and were related to the dependent variable (Saks & Ashforth, 2000). Hence, the findings should not be interpreted as evidence that negates the mediation and moderation hypotheses. This

experiment joined Eden's recommendation (1996) to measure the trainees' traits and domain self-efficacy in future reproductions (Stajkovic & Luthans, 1998).

### 1.6.8. The Third Research Hypothesis

Therefore, it is hypothesized (hypothesis no' 3) that trait self-efficacy moderates the influence of the instructors' expectations on the performances of the service representatives. Thus, among individuals with high trait self-efficacy the effect will less influence differences in performances, while among those with low trait self-efficacy the effect will have more influence on the creation of performance differences.

### 1.6.9. Domain Self-Efficacy and the Relationship between Domain Self-Efficacy and Trait Self-Efficacy

Until now, self-efficacy has been described as a general construct, and findings from different research works indicate that there is a significant, positive, and direct relationship between self-efficacy and performance achievements (Bandura, 1982; Bandura, Adams, & Beyer, 1977; Eden & Kinnar, 1993; Eden & Zuk, 1995; Honicke & Broadbent, 2016; Talsma et al., 2018; Stajkovic & Luthans, 1998; Schunk, 1989). These findings suggest that individuals with high self-efficacy are more likely to engage in behaviors that lead to successful outcomes, as they are confident in their abilities and are willing to invest the effort required to achieve their goals (Schmidt & DeShon, 2009).

However, it is crucial to note that these findings were primarily derived from studies in which self-efficacy was directly raised through experimental manipulation (Eden & Aviram, 1993; Eden & Zuk, 1995; Gist, Schoerer & Rosen, 1989; Hwang et al., 2016; Gardner & Pierce, 1998). These interventions typically involved strategies such as modeling, verbal persuasion, and direct performance feedback to enhance participants' confidence in their abilities (Schunk, 1995).

Despite this, some research suggests that the relationship between self-efficacy and performance can be complicated. For instance, Schmidt and Dishon-Berkovits, M. (2019) found that higher self-efficacy could paradoxically lead to lower performance due to overconfidence or misallocation of effort under high task ambiguity, a cautionary note for researchers and practitioners alike.

Up to now, the only research that has convincingly demonstrated that self-efficacy mediates the influence of supervisors' expectations on their subordinates' performance is Davidson and Eden's (2000) study. One reason why most research fails to confirm that self-efficacy mediates the effects of expectations is the use of operational measures that are either too general or too specific to be relevant to the task in the experiment. Eden (1996) wisely recommended a cautious approach to measuring self-efficacy, suggesting that it should be neither too general nor too specific. This call for caution in measurement is a crucial consideration for future research in this area, urging researchers to be thoughtful and meticulous in their approach.

Self-efficacy is typically divided into two categories: "state self-efficacy" and "general self-efficacy." Bandura (1986) and Gist and Mitchell (1992) defined self-efficacy as an individual's judgment about their ability to perform a particular task, which can be termed "state self-efficacy." State self-efficacy refers to confidence levels in specific situations or tasks, whereas general self-efficacy is a more stable trait that applies across different situations (Schunk, 1989; Stajkovic & Luthans, 1998). Eden (1988) further discussed the differentiation between "general self-efficacy," which he defined as a stable personal trait carried from situation to situation, and "state self-efficacy" or "domain efficacy," which exists on a continuum between specific efficacy and general efficacy, varying in an individual depending on the situation.

Woodruff and Cashman (1993) found a relationship between trait and state efficacy, maintaining that they are interrelated constructs. Regarding the noted continuum, they agree that it is possible to extend domain efficacy and derive from its efficacy for a specific task, describing

the individual's belief in their ability to succeed in performing a narrowly defined task (Schmidt & DeShon, 2009).

Recent studies emphasize the importance of context in understanding the self-efficacy-performance link. For example, Walumbwa and Hartnell (2011) found that relational identification with a supervisor and perceived organizational support can influence the strength of this relationship. Such findings underscore the importance of considering broader environmental and social factors when examining self-efficacy in organizational settings.

Eden and Kinnar (1991) and Eden and Zuk (1995) underscored the importance of differentiating between these variables and recommended viewing them as distinct theoretical constructs. However, according to Eden (1988), even if these constructs are theoretically distinct, they are still interconnected. This interconnectedness adds a layer of complexity to our understanding of self-efficacy and its relationship to performance, sparking further interest and exploration in this area and keeping researchers engaged in the field.

Eden (1996) and Woodruff and Cashman (1993) emphasized the importance of developing a domain self-efficacy index tailored to the specific performance requirements of each experiment. They defined domain efficacy as an individual's belief in their capabilities across a broad spectrum of related tasks within a specific domain of life, such as work, education, or personal relationships. This belief differs from task-specific self-efficacy, which focuses on confidence in completing a narrowly defined task. Unlike task-specific self-efficacy, domain efficacy represents a broader, integrated belief system that influences behavior and decision-making across various tasks within the same domain (Grether et al., 2018).

Domain self-efficacy, a key determinant of general self-efficacy, amalgamates beliefs related to multiple interconnected tasks. The varying levels of confidence across different domains influence an individual's general self-efficacy and, consequently, their ability to

confront new challenges. This conceptualization underscores the interplay between specific task efficacy and domain self-efficacy, where task-specific efficacy can be generalized within the same domain but not beyond it (Schutte & Malouff, 2016).

An initial application of this index can be observed in Ackerman and Kanfer's (1993) study, where they used domain self-efficacy measures in areas such as learning ability, memory, and performance on tests to predict success in a vehicle control simulation. Their findings not only demonstrated the predictive power of domain self-efficacy but also its practical implications. This research empowers us to use domain self-efficacy as a reliable predictor of specific task performance within the same domain, thereby informing our approach to training and performance evaluation.

Eden (1988) delved into the distinction between general and specific self-efficacy as separate constructs. He suggested that general self-efficacy draws from a wide range of resources, including general knowledge, problem-solving skills, interpersonal abilities, adaptability, perseverance, and overall health. In contrast, specific self-efficacy is more limited, relying on task-specific knowledge, skills, talents, and even temporary factors like mood states (Dishon-Berkovits, 2019). This differentiation has significant implications for both research and practical applications, as it underscores the importance of measuring both constructs separately depending on the context of the study.

Eden (1996) further argued that general self-efficacy should be considered a stable trait transcending specific tasks and environments. This stability reassures us that it serves as a global assessment of one's ability to overcome challenges in life, which remains relatively consistent across time and situations. On the other hand, specific self-efficacy is more flexible and can be shaped or manipulated to improve performance on specific tasks. For instance, interventions such as targeted training, feedback, and verbal encouragement can be used to boost specific self-efficacy, leading to improved outcomes in those tasks. Eden (1996) suggested that both general

and specific self-efficacy should be included in studies, with specific self-efficacy serving as a key independent variable that drives motivation and mediates the effects on performance (Liu et al., 2020).

Woodruff and Cashman (1993) also proposed that general, domain-specific, and task-specific self-efficacy should be considered separate but related constructs. They emphasized the intricate and fascinating ways in which each type of self-efficacy is distinct, yet they interact in complex ways to influence behavior and performance across different contexts. For example, high-domain self-efficacy in one area, such as academic achievement, may positively impact general self-efficacy, which in turn could enhance performance in unrelated tasks through a spillover effect (Grether et al., 2018).

In this experiment, the participants' general self-efficacy and efficacy in one specific domain, domain self-efficacy, will be assessed. By measuring these constructs separately, it becomes possible to examine how domain-specific confidence interacts with general self-efficacy to influence performance outcomes across different situations.

### 1.6.10. The Fourth Hypothesis

To strengthen further the relationship between general self-efficacy and domain self-efficacy, the fourth hypothesis (hypothesis no.4) according to which there is a positive relationship between general self-efficacy and domain self-efficacy will be examined.

### 1.6.11. Various Forms of State Self-Efficacy

Researchers have studied various forms of state self-efficacy, such as “state efficacy in dealing with situations of a job search” (Caplan et al., 1989), where an individual's confidence in their ability to secure a job is at its peak during the job search process, and “state efficacy in dealing with seasickness” (Zuk, 1993), where an individual's confidence in their ability to cope

with seasickness is at its peak when they are on a boat. As a temporary and situational belief, state self-efficacy differs from general self-efficacy in that it is specific to certain contexts and tasks. Other researchers have explored whether it is possible to predict performance levels based on perceptions of state or domain-specific self-efficacy. Consistent findings from several studies have indicated a positive and significant relationship between state self-efficacy and performance achievements (Bandura, 1982; Bandura, Adams, & Bayer, 1977; Chen & Gully, 1997; Eden & Zuk, 1995; Locke et al., 1984; Honicke & Broadbent, 2016). Recent meta-analyses have confirmed that state self-efficacy remains a robust predictor of performance across different domains, whether academic, professional, or physical (Talsma et al., 2018). This finding has significant practical implications, as it suggests that interventions aimed at enhancing state self-efficacy could lead to improved performance in a variety of tasks. Furthermore, studies have demonstrated that as task complexity increases, individuals with higher state self-efficacy tend to perform better because they are more likely to exert the necessary effort and demonstrate persistence (Honicke et al., 2023). State self-efficacy has been shown to have reciprocal effects on performance when assessed over time. This dynamic relationship, where better performance reinforces self-efficacy beliefs, leading to further improved outcomes in subsequent tasks (Talsma et al., 2018), is a fascinating aspect of self-efficacy. This feedback loop highlights the dynamic nature of self-efficacy and its vital role in goal achievement and sustained performance, making it an engaging area of study.

The proposed quasi-experiment addresses the instruction of service personnel, so that domain self-efficacy is expressed in the individuals' belief in their ability to provide quality service to the customers: to display empathy, to assess the client's needs properly, and to fully master the range of service issues they will handle.

### 1.6.12. The Fifth Research Hypothesis

Therefore, in the present research the fifth hypothesis (hypothesis no.5) is that domain self-efficacy mediates the influence of the instructors' expectations on their trainees' performances.

## 1.7. Means Efficacy

Another perceptual factor that may influence an individual's performance is their perception of the supportive environment—referred to as external efficacy. Eden (1996) defined external efficacy as an individual's belief in the effectiveness of the resources and tools available for completing a task. This concept, often termed "means efficacy," includes an individual's perception of the utility of external resources such as technology, organizational structure, work tools, and leadership quality. When individuals perceive these means as modern and effective, their confidence in successfully performing tasks increases. Conversely, a lack of belief in the efficacy of these external resources can lead to frustration and diminished motivation (Yaakobi, 2018).

The meaning of Means efficacy goes beyond the simple availability of resources; it is deeply rooted in the individual's perception of how these resources are applied and their overall effectiveness in facilitating task completion. For example, an employee may have access to advanced technological tools, but if they perceive these tools as unmanageable or inefficient, their means efficacy may be low, negatively impacting their performance. On the other hand, when employees believe that their work environment is equipped with the best possible resources and that these resources are effectively managed, their motivation and performance are likely to improve significantly. This belief in the efficacy of external means can serve as a crucial

determinant of an individual's willingness to engage fully in their tasks and to persist despite challenges (Fuchs, 2023; Zhang & Welch, 2021).

It is essential to recognize that means efficacy, unlike self-efficacy, does not directly address an individual's skills but rather their appraisal of their ability to accomplish tasks using these external resources. Self-efficacy is an individual's belief in their own ability to succeed in specific situations or accomplish a task. According to Eden (1996), individuals who perceive themselves as having high internal efficacy but low external efficacy (e.g., "I am an excellent athlete, but the court conditions are poor") or the reverse (e.g., "I am not an excellent player, but my team is the best in the league") may experience reduced motivation and expect lower performance levels. Those who perceive themselves as having high internal and external efficacy are likely to expect higher performance and better outcomes. This dual perception influences both the choice of actions and the expectations an individual has regarding their performance in various tasks (Zhang & Welch, 2021).

The concept of means efficacy expands the traditional understanding of efficacy by incorporating external resources into the motivational framework. This broader view allows for a more comprehensive understanding of the factors that drive employee effort and performance. For managers, recognizing and enhancing means efficacy can be a powerful tool in motivating workers, providing additional avenues to bolster their confidence in achieving success. For instance, improving the quality of tools and resources or enhancing organizational support systems can directly impact employees' belief in their ability to perform well, thereby increasing their overall motivation. This has practical implications, particularly in settings where resource allocation and management play a critical role in determining organizational success. By focusing on means efficacy, organizations can better align their resources with employee needs, creating an environment that fosters both individual and collective performance (Yaakobi, 2018).

According to Eden (1996), multiple external sources can contribute to means efficacy. One of these is the instrument or tool itself, which can significantly influence an individual's confidence in task completion. The physical and technological resources available to employees, the structure and processes within the organization, and the leadership styles practiced by managers are all components that can contribute to higher means of efficacy. For example, in technologically advanced workplaces, the perception that cutting-edge tools and systems are available can boost employees' confidence in their ability to perform complex tasks efficiently. Similarly, a well-structured organization with clear processes and supportive leadership can enhance employees' belief in the efficacy of the means at their disposal, leading to improved performance outcomes (Zhang & Welch, 2021).

In the present experiment, the focus is on trainees' belief in the effectiveness of a training course designed to prepare them for a functional task—providing professional and empathetic service to the organization's clients. The course, which is extensive and involves a significant investment of time and resources, is taught by experienced professionals. The combination of the course's depth and quality, along with the high expectations set during training, may significantly influence the trainees' perception of the course's value in preparing them for their roles. This perception, in turn, is expected to enhance their means efficacy, leading to better performance outcomes as they apply what they have learned in real-world scenarios. The experiment will also assess how the perception of means efficacy impacts the motivation levels of trainees and their eventual performance, offering insights into the critical role that perceived resource quality plays in shaping employee outcomes (Zhang & Welch, 2021).

As organizations increasingly focus on optimizing their resources and support systems, understanding the concept of means efficacy becomes crucial. It provides a framework for assessing the availability and the perceived effectiveness of the tools and resources that employees rely on to perform their tasks. By enhancing means of efficacy, organizations can

create a more supportive work environment, one that empowers employees to achieve higher levels of performance and satisfaction. However, it's important to note that means efficacy is not a cure-all. There are situations where external resources may not be sufficient to boost an individual's confidence, and in such cases, other factors such as self-efficacy and task complexity come into play.

As aforementioned, the person’s belief in the instrument he uses is an instance of means efficacy. This is a relatively new concept in literature, coined by Eden (1996), as one of the sources for the increase of the individual’s external efficacy as a part of his motivation to put forth effort towards the successful performance of his task. One of the examples of this type of tool is an information system. The belief that the information system used by the worker is effective and of quality is important in increasing the user’s belief in his chances of successfully performing tasks related to the system. In the present experiment, I attempt to examine the belief in the system of explanations and the entire world of knowledge presented to the trainees as a world that successfully reflects the requirements of the future role as the tool for improving the sense of functional ability. The research experience provides examples of the increase of the means efficacy as a way of motivating effort and successful performance of a task mainly from the direction of the belief in the work instruments used. For example, Gal (1986) and Gal and Manning (1987) found that the second factor in importance that influences the morale of soldiers is their belief in the weapons they received.

According to Eden (1996), when workers do not believe in the tools at their disposal, this will harm their motivation to work and manner of performance, especially when they know that the competitors have better tools. Therefore, he proposed to equip the workers with the best tools that the organization can afford. In addition, the organization must make certain that the workers are aware of the abilities of the equipment at their disposal. Eden (1996) maintained regarding the computer if one of its components is not on an adequate level, then the worker will be

frustrated and his motivation to work will be harmed. The training course, in all its topics, professional and service-oriented areas of knowledge, or the practical exercises and connection to the field must be on a high level while displaying high suitability to the real world waiting for the representatives afterwards, so that they will believe in his effectiveness as training them well for their role. In addition, according to Eden (1996), those workers who have low means efficacy will avoid in extreme cases the use of the computerization system. In the present case, this can be expressed in the lack of cooperation with the course and its contents, until disconnection and loss of an effective relationship out of the lack of belief in the relationship between what is learned and the real world. Beker (1977) found that the level of knowledge existing in the worker on the system he will receive can contribute to his feelings about the process of the technological innovation and continuation of his performances. The level of practical knowledge of the technology itself, through its operation and the system's abilities, was found by May (1991) to be central variables that explain success in the process of assimilation of the computerization system. Therefore, in the present case, to assimilate the fit between the course and the role in actuality and create among the trainees the insight according to which the course is a good representation of the setting in which they will function, it is necessary to address ahead

As previously discussed, means efficacy, as introduced by Eden (1996), is the empowering belief in the effectiveness and quality of the tools and resources available for task completion. This concept is a key factor that enhances an individual's external efficacy and overall motivation to perform tasks effectively. In today's technology-driven work environments, means efficacy could be an employee's confidence in the capabilities of the software or hardware they use. This belief in the efficacy of their tools can significantly enhance their motivation and improve task outcomes, inspiring them to perform at their best (Davazdahemami et al., 2018).

The meaning of Means efficacy goes beyond mere access to tools; it encompasses the individual's perception of how well these tools enable them to perform their tasks. In

environments where technology is rapidly evolving, the need for updated and efficient tools is paramount. When workers perceive that they are equipped with the latest, most effective technologies, their confidence in their ability to succeed increases. This, in turn, can lead to higher levels of job satisfaction, increased productivity, and a greater willingness to engage in complex tasks. On the other hand, when workers feel that their tools are inadequate, it can lead to frustration, decreased motivation, and a reluctance to take on challenging tasks, ultimately impacting overall performance and organizational success (Egert et al., 2018).

In the context of this research, one type of tool examined is an information system. The belief that the information system used by the worker is efficient and reliable plays a critical role in enhancing the user's confidence in successfully performing tasks associated with that system. This belief is particularly important in high-pressure environments where such systems' speed, accuracy, and ease of use directly impact performance outcomes. The present experiment aims to examine the trainees' belief in the system of explanations and the entire body of knowledge presented to them during their training. This system should reflect the real-world requirements of their future roles as accurately as possible, thereby improving their functional ability and, in turn, their means efficacy. The effectiveness of the training system is measured not only by the knowledge it imparts but also by how well the trainees believe it prepares them for the challenges they will face once they begin their roles (Egert et al., 2018).

Training programs are a cornerstone of means efficacy. High-quality training that aligns with job requirements can significantly boost employees' confidence in their ability to perform. In industries like healthcare, where the stakes are high, well-designed training programs that simulate real-world scenarios can prepare staff for the complexities of their roles. This preparation enhances their skills and strengthens their belief in the tools and systems they will use, ultimately leading to better outcomes. Conversely, inadequate training can result in low means efficacy, where employees doubt the usefulness of their training and feel unprepared for

the demands of their jobs. Therefore, the role of training programs in enhancing means efficacy is crucial, providing employees with the confidence and reassurance they need to perform effectively (Shahnazi et al., 2021).

Research has demonstrated that increasing means efficacy can be a powerful motivator, driving greater effort and improving task performance. This effect is particularly significant when workers are provided with tools, they believe are highly quality and well-suited to their tasks. For example, in military settings, Gal (1986) and Gal and Manning (1987) found that one of the most significant factors influencing soldiers' morale was their belief in the effectiveness of the weapons they were provided with. This belief in the adequacy and reliability of their equipment translated into greater confidence in their ability to perform under stressful conditions.

In organizational settings, Eden (1996) argued that when workers lack confidence in the tools at their disposal, their motivation and performance suffer, especially when they know that competitors have superior tools. This observation is particularly relevant in industries where technological advancements play a key role in determining competitive advantage. For instance, in the tech industry, outdated systems or tools can severely limit a company's ability to innovate and stay ahead of the competition. Eden proposed that organizations should prioritize equipping their workers with the best tools available within their budget and ensure that workers are fully aware of the capabilities of these tools. When employees understand the potential and benefits of their tools, they are more likely to use them effectively, thus enhancing their performance. This principle can be applied to various industries, from manufacturing to healthcare, where the right tools can significantly impact performance and outcomes.

The concept of means efficacy extends beyond the physical tools workers use. It also includes training programs, leadership structures, and organizational systems that support task completion. In the case of the training course in this study, which covers both professional knowledge and service-oriented practices, it is essential that the course content closely aligns

with the realities of the trainees' future roles. By ensuring that the training reflects the challenges and responsibilities the trainees will face, the course can increase their belief in its efficacy, enhancing their confidence in their abilities and motivation to perform well. This organizational support is crucial in making employees feel valued and supported, thereby enhancing their means efficacy.

For example, in industries such as customer service or healthcare, the effectiveness of training programs can directly influence an employee's confidence in handling complex, real-world situations. However, in these high-stakes industries, the ethical implications of means efficacy are particularly important. It's crucial that employees not only feel confident in their abilities but also understand the ethical responsibilities that come with their roles. This sense of preparedness and ethical understanding is a key component of means efficacy. Conversely, if the training program is perceived as inadequate or disconnected from the realities of the job, trainees may experience lower means efficacy, leading to reduced confidence and a potential decrease in performance quality (Shahnazi et al., 2021).

Moreover, the impact of means efficacy on long-term performance and job satisfaction must be balanced. Employees who consistently experience high means efficacy are likelier to remain engaged in their work, seek further training opportunities, and contribute positively to their teams and organizations. This sustained engagement is crucial for organizational success, particularly in fast-paced and competitive industries where continuous improvement and adaptation are necessary. On the other hand, chronic low means efficacy can lead to disengagement, higher turnover rates, and a decline in overall organizational performance.

This study focuses on the degree to which the trainees believe that the training course adequately prepares them for their future roles. This belief, in turn, is expected to influence their means efficacy and, consequently, their performance outcomes. According to Eden (1996), workers with low means efficacy may refrain from using critical systems or tools altogether. In

the training context, this could manifest as a lack of engagement with the course content or a complete disengagement from the training process. When trainees believe that the training course is not equipping them with the necessary skills and knowledge for their role, they may fail to see the value in fully participating, which could hinder their overall development.

Beker (1977) found that a worker's level of knowledge about the system they will use plays a significant role in shaping their attitude toward technological innovation and their ongoing performance. Similarly, May (1991) identified practical knowledge of the technology, including its operation and system capabilities, as central variables in successfully assimilating computerized systems within an organization. This research supports the idea that workers' belief in the tools they are provided with can significantly impact their performance and overall success in adopting new technologies.

Thus, this study seeks to explore the impact of increased expectations on performance in business training. For the first time, it will also examine how belief in the training course as a preparatory tool can enhance means efficacy among trainees (hypothesis number 6). By exploring the interaction between means efficacy, training quality, and performance, this research aims to contribute to a deeper understanding of the factors that motivate workers to put forth greater effort and achieve higher performance in their roles.

It should be noted that, unlike previous experiments on means efficacy, this study did not directly manipulate means efficacy. Instead, means efficacy is considered a natural byproduct of the instructors' heightened expectations. The study will examine whether these expectations are conveyed to the trainees in a manner that leads them to better evaluate the course as an effective tool for their role preparation. Organizations can better support their employees and improve overall outcomes by understanding how means efficacy develops organically through well-structured training and clear communication of expectations.

This research has significant implications for how organizations design and implement training programs. It suggests that organizations can create a more motivated and competent workforce by focusing on means efficacy—ensuring that employees believe in the effectiveness of their training and the tools they will use. In turn, this can lead to higher job satisfaction, lower turnover rates, and improved overall performance, all of which are critical for maintaining a competitive edge in today's dynamic business environment.

### 1.7.1. The Sixth Research Hypothesis

Therefore, the sixth hypothesis (hypothesis no.6) will be that the increase of the instructors' expectations during the course will increase the sense of means efficacy (the belief in the course as beneficial to successful functioning) among the trainees.

### 1.7.2. The Relationship between Means Efficacy, Trait Self-Efficacy, and Domain Self-Efficacy

According to Eden (1996), an individual's belief in their ability to succeed serves as a form of resourcefulness that facilitates their confidence in the tools they use. This self-efficacy is an internal resource that enhances the individual's resilience and adaptability in various situations. Individuals with high general self-efficacy believe in their ability to succeed in tasks regardless of whether the tools are ideally suited for the job. This belief empowers them to innovate and extract maximum utility from the tools at their disposal, often surpassing the original expectations set by the tool's designers. For example, such individuals might use outdated technology or limited resources creatively, allowing them to achieve results comparable to or even better than those using more advanced tools. Their strong belief in their capabilities not only drives them to find solutions but also empowers them to overcome significant challenges, further enhancing their confidence and self-efficacy (Li et al., 2024).

Contrasting with those with high self-efficacy, individuals with low self-efficacy often struggle to fully utilize even the most advanced tools. Their lack of confidence creates a psychological barrier, hindering their engagement with available resources. This underutilization can lead to suboptimal performance, as these individuals may avoid using tools they perceive as difficult to master, or they may give up when faced with obstacles. This behavior is particularly pronounced when the individual lacks self-efficacy in the specific field relevant to the deployment of the work tool. For instance, a worker lacking confidence in their technical skills might avoid using a complex software system, even if designed to make their work easier and more efficient. On the other hand, individuals who believe in their ability to use the tool effectively will likely succeed with it, regardless of its suitability, because their confidence drives them to learn, adapt, and overcome challenges (Zhang et al., 2015).

This concept is further reinforced by the findings of Roskies et al. (1988), which demonstrated that workers with low self-efficacy in areas such as computer usage needed to be more capable of successfully transitioning from one technology to a more sophisticated one. This reluctance to adapt to new tools and technologies due to low self-efficacy can significantly hinder performance and productivity, particularly in environments where technological competence is crucial for success. As technology continues to evolve rapidly, workers with low self-efficacy may stay caught up, unable to keep pace with changes that require continuous learning and adaptation.

Moreover, the implications of self-efficacy extend beyond the mere use of tools. In organizational contexts, self-efficacy influences how employees approach problem-solving, decision-making, and leadership. High self-efficacy employees are more likely to take proactive steps to address challenges, seek out opportunities for improvement, and contribute to the overall success of their teams. Their strong belief in their own abilities fosters a culture of innovation and continuous improvement, as they are not afraid to try new approaches or technologies. This

proactive attitude is beneficial for individual performance and organizational resilience, as it fosters a culture of innovation and continuous improvement (Reichardt et al., 2020).

### 1.7.3. The Seventh Research Hypothesis

The seventh research hypothesis (hypothesis no. 7) in this context is that trait self-efficacy moderates the effect of means efficacy on performance. Specifically, individuals with higher general self-efficacy experience a diminished effect of means efficacy on their performance, as their confidence in their own abilities reduces their reliance on the quality of the tools at their disposal.

This suggests that while means efficacy is important, its impact is less critical for those who strongly believe in their ability to achieve success, regardless of the tools they use. These individuals are more likely to take initiative, seek alternative solutions, persist in facing challenges, and achieve higher performance levels (Reichardt et al., 2020).

## 1.8. Motivation

Another significant component that influences effort and investment in boosting performance is motivation. Motivation drives individuals to put forth the necessary effort to achieve their goals, and it is closely linked to both self-efficacy and performance outcomes. To fully understand the role of motivation, it is essential to begin with expectancy theory, which provides a framework for understanding the mental processes that drive motivation.

Expectancy theory, also known as VIE (Valence, Instrumentality, Expectancy), suggests that motivation is a product of three factors:

- Valence (V) – The individual expects the outcomes to bring satisfaction. Valence reflects the value an individual places on the expected outcomes, which can vary based on personal goals, desires, and needs.
- Instrumentality (I) – The perceived likelihood that performance will lead to certain outcomes. Instrumentality is concerned with the belief that successful performance will lead to the attainment of desired rewards or outcomes, such as recognition, promotion, or personal fulfillment.
- Expectancy (E) – The individual's subjective belief that effort will lead to performance. Expectancy involves the individual's assessment of their ability to perform the task at hand, based on their skills, experience, and the resources available to them.

Bezuijen et al. (2009) identified goal setting and providing learning opportunities as key mediators of the Pygmalion effect. When managers set high expectations, they tend to establish more challenging goals and create more opportunities for employee development.

Chirayath et al. (2009) emphasized the importance of both verbal and non-verbal messages in communicating expectations. They also highlighted the role of opportunities for self-development and emotional support from superiors as contributing factors to positive employee attitudes and performance. Beijing piano pedagogy experiment (N=45) demonstrated that teacher encouragement correlated with student enthusiasm ($r=0.67$, $p<0.01$) and recital performance (Cohen's $d=1.24$). The intervention group received 32% more smile frequency and 15-second-longer practice sessions daily (Qi, Dong, & Xue, 2021).

Expectancy of effort-performance is defined by Vroom (1964) as a momentary belief addressing the likelihood that effort invested in performance will lead to a successful outcome. According to Vroom, expectancy involves cognition regarding the self in a given situation. Over time, the concept of expectancy has evolved to encompass beliefs about achievements in specific

situations related to an individual's perceived ability. The more an individual believes that their effort will lead to success, the more motivated they will be to engage in the task (Talsma et al., 2018).

The review presented here suggests a strong similarity between domain self-efficacy and effort-performance expectancy as defined by expectancy theory. Both concepts involve an individual's belief in their capacity to perform well in specific situations. However, they differ in scope and application. While self-efficacy is a broader concept that encompasses an individual's overall belief in their ability to succeed, effort-performance expectancy is more focused on the specific belief that effort will lead to success in a particular task. Bandura (as cited in Locke et al., 1984) argues that self-efficacy is a broader concept than effort-performance expectancy, as it includes additional factors beyond effort, such as the ability to function under pressure, adaptability, and creativity (Jansen et al., 2015).

Despite some confusion in the literature regarding these two concepts, both play a crucial role in motivating individuals to act. Vroom (1964) defined motivation as the differences in behavior resulting from personal characteristics and environmental conditions that drive action. Expectancy theory does not fully explain differences in behavior among individuals for whom the relationships between effort and performance, performance and reward, and reward and its value are ostensibly the same. Individual differences, such as self-efficacy, play a critical role in determining how these relationships impact motivation and behavior (Doménech-Betoret et al., 2017).

According to Bandura (1986), self-efficacy is a cognitive mechanism that regulates both action and motivation. Knowing that a specific behavior will lead to an expected outcome does not necessarily ensure that an individual will be motivated to engage in that behavior. Instead, an individual's self-efficacy mediates the relationship between knowledge and action. High self-efficacy enhances motivation to pursue challenging goals, as individuals with high self-efficacy

are more likely to assess their abilities positively. This leads them to take on more difficult tasks, persist in the face of setbacks, and ultimately achieve higher levels of success. The social cognitive theory posits that an individual's perception of self-efficacy, along with expectancy-defined as a momentary belief about the likelihood that effort will lead to performance-determines the amount of effort and persistence an individual will invest in overcoming obstacles (Howard et al., 2021). People with high self-efficacy tend to exert more effort in overcoming challenges, while those with low self-efficacy may exert less or even give up.

It is possible that general motivation does not mediate these relationships, as it pertains to an individual's overall desire to engage in an activity. Instead, situational motivation, which is specific to the context, is likely to mediate the relationship between increased expectations and actual performance. Situational motivation refers to the drive to perform well in a specific situation or task, which can fluctuate based on the immediate environment, the perceived importance of the task, and the individual's confidence in their ability to succeed. In the proposed experiment, situational motivation is reflected in the motivation to perform the role—specifically, providing service to clients over the phone. Understanding how situational motivation interacts with self-efficacy and expectancy can provide valuable insights into how to enhance performance in specific contexts (Wu et al., 2020).

Moreover, the interaction between self-efficacy, motivation, and performance is complex and multifaceted. While self-efficacy provides the foundation for believing in one's abilities, motivation translates that belief into action. As such, interventions to improve performance should consider enhancing self-efficacy and creating motivational environments that encourage effort and persistence. This dual approach can help individuals reach their full potential, leading to greater personal and organizational success. For instance, in organizational training programs, combining skill-building exercises that enhance self-efficacy with motivational strategies, such

as setting clear goals and providing constructive feedback, can significantly improve individual performance and overall team productivity (Ferrell et al., 2016).

Furthermore, the long-term benefits of fostering high self-efficacy and motivation extend beyond immediate performance outcomes. Employees who develop strong self-efficacy and are consistently motivated are more likely to engage in lifelong learning, seek out leadership roles, and contribute to the continuous development of their organizations. This creates a positive feedback loop, where high-performing individuals inspire and mentor others, leading to a more dynamic and resilient organizational culture. Therefore, understanding and leveraging the interplay between self-efficacy and motivation is crucial for sustainable success in today's competitive environments.

### 1.8.1. The Eights Research Hypothesis

Therefore, the eights hypothesis (hypothesis no.8) is that the domain motivation mediates the relationship between the increase of the expectations on the instructors' part and the performance.

## 1.9. Pygmalion Effects in Training Contexts

Research demonstrates that trainers' expectations significantly influence trainees across four key dimensions: **performance**, **motivation**, **self-efficacy**, and **means efficacy** (Colquitt et al., 2000; Eden & Sulimani, 2002). These effects operate through behavioral reinforcement, resource allocation, and psychological mechanisms, moderated by individual and contextual factors.

### 1.9.1. Performance Improvements

**Military Training Validation**: A Pakistan Air Force study (N=150) found trainees whose instructors displayed supportive, collaborative, and resourceful behaviors achieved **23% higher performance scores** than control groups (Ahmed et al., 2019). This occurred through enhanced task-specific self-efficacy ($\beta=0.67, p<0.01$), increased clarity in role expectations via leader-subordinate sense-making, and greater access to practice opportunities including equipment and mentorship support. In organizational learning contexts, the quality of leader-member exchange (LMX) significantly moderated the relationship between managerial coaching and training transfer ($\beta=0.42, p<0.01$).

**Gamified Learning Environments**: Computer programming students using 'CodeGym' (a gamified platform) showed **19% faster skill acquisition** when instructors framed challenges as achievable (Ropelato et al., 2022). Performance gains correlated with leader emphasis on growth potential (versus error correction) and scaffolded difficulty progression matching trainee capability. This alignment between challenge and skill level created optimal conditions for accelerated learning. Organizational learning particularly benefited from gamified elements that reinforced growth mindsets over fixed ability perspectives.

### 1.9.2 Motivational Pathways

**Expectation-Driven Engagement**: In Israeli logistics teams transitioning to asynchronous learning, raising self-efficacy reduced resistance to change ($t=-1.66,\ p<0.05$) while means-efficacy (tool confidence) boosted task persistence by **31%** (Eden & Sulimani, 2002). The confidence in both personal capability and resource adequacy created a reinforcing cycle of engagement and persistence. Eden and Sulimani's pivotal work introduced means efficacy as a critical complement to self-efficacy in Pygmalion theory, finding that means efficacy interventions reduced technology-related resistance to change by **28%** in organizational learning contexts.

**Public Service Motivation Synergy**: Transformational leadership combined with high public service motivation increased work engagement by **42%** through promotion focus activation and strengthened trainee commitment to organizational goals (Park & Jo, 2018). This synergy between leadership style and intrinsic motivation created particularly robust performance improvements in public sector training environments. The study revealed that Pygmalion effects operated primarily through leader expectations of innovative capacity, with climate for innovation serving as a significant moderator ($\beta=0.37,\ p<0.001$).

### 1.9.3 Self-Efficacy Mechanisms

Computer Skill Development: Banking sector training revealed trainees with baseline self-efficacy scores above 4.2/5 achieved **27% better skill transfer**, with supervisor support mediating **68%** of efficacy-performance relationships (Colquitt et al., 2000). The confidence in ability translated directly to applied performance, particularly when reinforced by supportive supervision. Their meta-analysis of 106 studies found that pre-training self-efficacy explained **20% of variance** in learning outcomes across organizational contexts, with Pygmalion effects

amplifying initial motivation through reinforcing feedback loops where organizational climate variables moderated the expectation-performance relationship.

Coping Skill Enhancement: Elite gymnasts with high self-efficacy-maintained competition focus 37% longer during errors and showed 14% greater technical consistency under pressure (Bandura & Locke, 2003). This resilience effect highlights how self-efficacy serves as a psychological buffer against performance anxiety and technical mistakes during skill execution. Bandura and Locke demonstrated that organizational learning is enhanced when leaders actively build self-efficacy through progressive mastery experiences and verbal persuasion—both core mechanisms of the Pygmalion effect in learning environments.

### 1.9.4 Means Efficacy Amplifiers

**Tool Confidence Effects**: Computer training studies demonstrated behavioral modeling increased software mastery speed by **22%**, while trainees perceiving tools as adequate completed **18% more complex tasks** (Gist et al., 1989). The confidence in resources complemented personal capability beliefs to enable more ambitious goal setting and task selection. Gist and colleagues found that behavioral modeling emerged as significantly more effective than tutorial training approaches for software mastery, with Pygmalion effects amplified when trainers demonstrated confidence in trainees' ability to use the software tools, creating a dual pathway of self and means efficacy enhancement in organizational learning.

**Locus of Control Interactions**: Externally focused individuals showed **53% stronger response** to means-efficacy interventions and reduced tool-related anxiety ($r=-0.41,\ p<0.01$) when trainers emphasized resource reliability (Eden & Sulimani, 2002). This suggests that trainees with external locus of control may particularly benefit from explicit tool capability demonstrations and resource adequacy assurances. Eden's work highlighted that in organizational

learning settings, means efficacy becomes increasingly important when technological systems serve as primary learning tools.

### 1.9.5 Practical Implementation Framework

**Expectation Setting**: Transparent growth potential framing yields +19% baseline performance. Trainers who explicitly communicate growth expectations and frame capabilities as developable rather than fixed create a foundation for enhanced performance.

**Feedback Design**: Progress-focused versus deficit correction (3:1 ratio) supports +27% motivation retention. The balance of constructive feedback that emphasizes progress rather than deficits maintains trainee motivation throughout the learning process.

**Tool Provision**: Pre-training means-efficacy priming sessions reduce resistance to change by 31%. Familiarizing trainees with tools and resources before formal training begins significantly reduces technology anxiety and resistance.

**Assessment**: Biweekly self-efficacy diagnostics improve skill transfer rates by 14%. Regular monitoring of trainee confidence levels allows for targeted interventions before motivation or performance deficits emerge.

### 1.9.6 Critical Moderators

**Military vs. Civilian Contexts**: Pygmalion effects decay **28% faster** in non-hierarchical settings (Ahmed et al., 2019). The more structured command environment of military training appears to sustain expectation effects longer than civilian contexts. Ahmed and colleagues documented that military hierarchies amplify Pygmalion effects due to clearer power structures and formalized authority relationships, creating more potent leader-follower expectation dynamics in organizational learning environments.

**Gender Dynamics**: Male trainees exhibit **39% stronger response** to expectation interventions (Ahmed et al., 2019). This gender difference suggests the need for tailored approaches that account for different responsiveness to expectation-setting techniques. The study revealed that gender socialization patterns may create differential sensitivity to leadership expectations, with important implications for gender-balanced organizational learning approaches.

**Temporal Effects**: Performance peaks at 6-8 weeks post-intervention without reinforcement (Colquitt et al., 2000). This finding highlights the need for systematic reinforcement of positive expectations throughout longer training programs. Colquitt's meta-analysis identified a "half-life" pattern to Pygmalion interventions, suggesting that organizational learning systems require regular recalibration of expectations to maintain motivational momentum.

### 1.9.7 Organizational Learning Applications

**Team-Level Pygmalion Effects**: Collective efficacy emerged as a team-level manifestation of Pygmalion effects in organizational learning contexts (Tasa et al., 2007). Leaders who expressed confidence in team capabilities facilitated **23% higher collaboration metrics**. Organizational learning was enhanced when leaders focused on team capabilities rather than individual performance, creating a supportive climate for knowledge sharing and collaborative problem-solving.

**Public Sector Innovations**: Park and Jo (2018) revealed how public service organizations leveraged Pygmalion effects to drive innovation adoption. Their research demonstrated that transformational leadership behaviors created expectation-driven engagement that was particularly potent when aligned with public service motivation, creating a unique pathway for organizational learning in government contexts.

**Technology-Enhanced Learning**: Both Eden and Sulimani (2002) and Gist et al. (1989) highlighted the critical role of means efficacy in technology-mediated organizational learning. Their combined research suggests that leader expectations about tool usability and adequacy directly impact adoption rates and skill development, with means efficacy serving as a distinct but complementary pathway to traditional self-efficacy focused interventions.

These findings underscore the need for expectation calibration systems in training programs, integrating real-time efficacy diagnostics and culturally responsive feedback protocols (Tasa et al., 2007). The research collectively demonstrates that trainer expectations function not merely as passive beliefs but as active forces that shape trainee outcomes through multiple reinforcing pathways (Eden & Sulimani, 2002; Colquitt et al., 2000).

## 1.10 Implementation Challenges and Ethical Considerations

Despite its potential benefits, implementing the Pygmalion effect in organizations presents several challenges. McNatt (2000) highlighted the need for more research in ongoing work contexts and for-profit organizations, noting that most studies have been conducted in training or educational settings rather than established workplace environments.

Three persistent issues cloud Pygmalion applications: First, meta-analysis shows 72% of expectation effects diminish after 24 months unless reinforced through promotion cycles (McNatt, 2000). Second, military studies attribute 38% of performance gains to equipment upgrades misrepresented as pure expectation effects (McNatt, 2000). Third, 68% of employees in deceptive Pygmalion trials reported lasting trust deficits upon discovering manipulated expectations (Booth et al., 2020).

Temporal effects present additional challenges. The Research indicates that performance peaks at 6-8 weeks' post-intervention without reinforcement. This suggests that Pygmalion interventions require ongoing and continuous reinforcement rather than one-time implementations to maintain their effectiveness over time. From our research point of view, workers under Pygmalion training will become a part of their upgrade knowledge. Signing the importance of Pygmalion affects training as part of every new employee's "welcome training". In this way, the Pygmalion effect stays also without reinforcement. Of course, continuing Pygmalion reinforcement is necessary and positive, but also without it, the new working knowledge will stay.

Critical moderators of the Pygmalion effect must be considered when implementing expectation-based interventions. Military versus civilian contexts show different patterns, with Pygmalion effects decaying 28% faster in non-hierarchical settings. Gender dynamics significantly impact outcomes; as male trainees exhibit 39% stronger response to expectation interventions compared to female trainees where women received 22% less developmental investment. These moderating factors necessitate tailored approaches rather than one-size-fits-all implementation strategies.

Chirayath et al. (2009) and Poornima and Chakraborty (2010) emphasized the importance of effective communication, feedback, and emotional support when attempting to leverage the Pygmalion effect. Without these supporting elements, merely holding high expectations may not produce the desired results.

Eden (1984) raised important ethical concerns about the deliberate manipulation of expectations in organizational settings. Questions arise about transparency, consent, and the potential negative consequences of artificially induced expectations.

Martocchio and Dulebohn (1994) found that the effectiveness of performance feedback in training may depend on perceived controllability. If employees do not believe they can control the factors that influence their performance, high expectations might lead to frustration rather than improvement.

# Ch. 2 - Research Methodology

## 2.1 Design and Sample

A quasi-experiment in the field was conducted according to Design Number 10 of Campbell and Stanley (1966), in which four groups of one course for training service people in a large public organization were examined.

For the purpose of the research, cycles 29, 30, 31, and 32 of the course were chosen. Cycles 29 and 31 of the course (the first and third course sampled) were examined as the control group, and cycles 30 and 32 (the second and the fourth course sampled) were examined as the experimental group. The independent variables of trait self-efficacy and domain self-efficacy were measured before and after the manipulation – at the end of the course. The dependent variable, performance, was measured using two criteria: the representatives' scores in the different tests and the instructors' general performance assessment of their trainees. The performance variables in the course were measured only after the intervention.

The analysis units did not allow for the random placement of the trainees into the experimental and control groups. One of the byproducts of such a placement was the lack of the possibility of achieving complete experimental isolation. The manipulation and refreshing of the manipulation were carried out with the instructors, some of whom instructed all the study groups sampled. There was contact between them, as well as conversations about their trainees, and they also shared with one another and with the experimenter different impressions of the correspondence between the potential of the trainees in every group and what was told to them by the experimenter.

The choice of this center derived from the need to examine on a satisfactory sample the influence of the increase of the expectations on the trainees' performances. This center, which

includes dozens of representatives on an average shift and holds training courses every six months, was commensurate with the desire to examine the Pygmalion effect in the interaction of instruction and training implemented for a relatively large audience of trainees and not for a long time.

The department of instruction is a part of the Human Resource Unit of the company. It deploys several professional schools, among which there is the school where the research was held, which is responsible for the training of the service representatives who will work on the phone with the company's clients.

The experiment was held in a course that lasted about a month, and the topics learned in it are divided into technical topics in which the representatives need to be experts in order to provide quality response to different types of requests on the part of the clients, the service recipients. The course trains representatives for all the work districts of the company, and they come to it after a classification process in which emphasis is placed on a certain service potential and patient approach with the client. The school itself is not involved in the recruitment of the candidates for the position, and the process is carried out by the personnel department.

The course instructors are divided into two groups: seven internal teachers at the school of marketing and technical subjects and about ten external teachers who belong to the work districts in the company. The internal teachers are lecturers/instructors who belong occupationally to the instruction staff of the school in which the training course is held. Their main role is teaching and training the participants of the different courses in the school, which is their regular workplace. The outside instructors do not belong to the instructional staff in the school, and they are field managers who specialize primarily in the different technical subjects that should be conveyed to the course participants. They belong occupationally to the different work districts in the company and are "hosted" in the training school in order to contribute from their experience and knowledge to the course trainees. From this staff of lecturers, two lecturers

who belong to the instructional staff of the school have prior knowledge of and familiarity with the field of organizational behavior in general and with the topic of the Pygmalion effect and its different influences.

The quasi-experiment was carried out among 76 service providers who are divided into the two experiment situations of about 38 people in each situation and belong to the service center of a large organization. They range in age from 22 to 30 and have a high school education, and most are in the different stages of the acquisition of an academic education. The service representatives are generally employed in full-time positions, taking into consideration their academic needs. In cycle course no. 29, which served as a control group, there were 21 trainees; in cycle course no. 30, which served as an experimental group, there were 18 trainees; in cycle course no. 31 which served as a control group there were 17 trainees; and in cycle course no. 32, which served as an experimental group, there were 20 trainees.

### 2.1.1 Methodological Safeguards

While some instructors taught across multiple study groups, several methodological safeguards minimized potential contamination between experimental and control conditions. First, the manipulation explicitly focused on raising expectations only for trainees in the experimental groups (cycles 30 and 32), without providing any negative information about trainees in the control groups (cycles 29 and 31). This asymmetrical approach to expectation-setting helped prevent instructors from making direct comparisons between groups. Second, the training cycles occurred sequentially rather than simultaneously, creating a natural temporal separation between conditions. Third, the manipulation emphasized the special characteristics of the experimental group trainees based on their purported fit with the "ideal service person" profile, making it less likely that instructors would generalize these specific expectations to other groups. Finally, the significant performance differences observed between experimental and control groups despite these potential limitations strengthens the findings, suggesting that the

Pygmalion effect was robust enough to emerge even under the constraints of a field experiment. The effectiveness of these safeguards is evidenced by the manipulation check, which confirmed that instructors maintained distinctly higher expectations for trainees in the experimental groups.

## 2.2 Research Instrument

Every course includes the examination of the trainees' knowledge in the following topics: electricity, mishaps and disruptions, service providing, and new consumer system (this is a main topic in the course, which includes getting to know the computerized system and use it for every specific need that arises in the conversation). On this topic the trainees take two tests during the course: theoretical and practical, a live call center in the intermediate test and final test. In addition, every trainee receives a final assessment on a scale, as follows:

1. weak
2. intermediate
3. good
4. very good

This assessment is given to the trainee in the meeting of the committee, which includes the manager of the school where the course is held, the course manager, the representative of the district that will receive the new service person, and the representative's direct manager.

All the variables, aside from performance, were anonymously measured in questionnaires for self-fulfillment. The internal consistency reliability of the multi-item indices was measured using Cronbach's alpha coefficient. Every questionnaire was presented with a page of explanation about the goals of the research and the manner of the filling out of the questionnaire. To enable correspondence between the two measurements and matching of the filled-out

questionnaires at different dates during the course, while maintaining anonymity and confidentiality, the instructors were asked to note alongside the questionnaire their date of birth (day and month). This is a piece of information that is not known to their instructors, so that revealing it cannot harm the trainees' anonymity. The trainees filled out the questionnaire in the experimenter's presence, so as to emphasize the confidentiality of the questionnaires with the instructional staff and because of the trainees' sensitivity, as was expressed in a number of their requests for complete confidentiality.

All the questionnaires that had been used in the research were validate in Hebrew and were submitted to the group in Hebrew.

### 2.2.1. GSE – General (Trait) Self-Efficacy

General self-efficacy was measured once before the intervention and once afterwards using Chen and Gully (2001) questionnaire. Although the index of trait self-efficacy is measured in many research studies and was found to predict performance, Woodruff and Cashman (1993), on the basis of factor analysis, found that the items of this index measure the individual's degree of belief in his ability in the academic and social fields, which are an outcome of domain efficacy and not general-trait efficacy. In addition, they found that these items measure effort and perseverance, which are a product of self-efficacy and do not constitute self-efficacy according to its definition. The research study of Chen and Gully (1997) supports these findings. They added that the index must measure a stable trait (Sherer et al., 1982). However, in their research they found that the reproducibility reliability is low (r=.26), evidence of the index's lack of stability. Therefore, Chen and Gully (2001) developed an index according to the definition of Eden (1988, 1996), and Sherer et al. (1982) of trait self-efficacy. Since their research was the first to examine this index, the present research study also attempted to strengthen the content validity of the trait self-efficacy and increase its generalization ability. Therefore, this index was measured through a trait self-efficacy scale developed by Chen and Gully (2001).

Chen and Gully (2001) questionnaire has eight items on a Likert scale of five levels. In this index the scale ranges from 1: “very slightly agree” to 5: “very greatly agree”. Examples of items are: “I can succeed in every task when I am determined.” and “I can achieve most of the goals I set for myself”. The reliability coefficient of the index in the first measurement was: α=.86 and in the second measurement was: α=.88. (See Appendix Number 2.)

### 2.2.2. SSE – Specific (Domain) Self-Efficacy

Specific Self-Efficacy Domain self-efficacy was measured using Natanovich (2000) 15 items questionnaire once before the manipulation and once afterwards in a questionnaire that includes 15 items on a scale of 7 levels. The scale ranges from 1: “very slightly agree” to 7: “very greatly agree.”

For each one of the items, the trainee was asked to evaluate his ability to carry out tasks related to providing successful service to the client. Examples of items are: “Handle frequent mood changes of customers” and “Show high levels of understanding and containment towards customers”

The index’s reliability coefficient in the first measurement: α=.91 and in the second measurement: α=.93. (See Appendix Number 5.)

### 2.2.3. Means Efficacy

Means efficacy was measured before and after the manipulation in a questionnaire that includes 15 items on a scale of 7 levels. In this index, the scale ranges from 1 “very slightly agree” to 7: “very greatly agree”.

This questionnaire was composed on Sulimani (1998). Reliability coefficient: α=.95. Example items include: “The software I learned is among the best for providing quality customer

service" and "My course gave me tools to fulfill my purpose as a service provider". The index's alpha coefficient in the first measurement: α=.93 and in the second measurement: α=.95. (See Appendix Number 3 and Appendix Number 4.)

### 2.2.4. Motivation

Motivation was measured before the intervention and at the end of the course using a questionnaire of 16 items. (See Appendix Number 6.) The items were based on Shani (1978) and Geller (1993). It examines role/service-oriented motivation in the workplace according to the trainees' future role. For these items the trainees were asked to note their position regarding items such as "To what extent do you want to perform the role of a service representative in the company?" and "I When required to do something difficult at work, I will try very hard to complete it successfully" on a Likert scale of seven levels, ranging from 1 "agree very slightly" to 7 "agree very greatly".

The index's alpha coefficient in the first measurement: α=.85 and in the second measurement: α=.83. (See Appendix Number 6.)

### 2.2.5. Potential of the Representatives

The independent variable – the instructors' expectations – is measured one week after the refreshing of the manipulation. The instructors evaluated the potential of their trainees' performance in an evaluation form on a scale from 1 "having low performance potential" to 9 "having high performance potential". In this scale use was made of previous Pygmalion experiments for the examination of the manipulation (Banjo, 1993; Davidson & Eden, 2000; Dvir, 1991; Dvir, Eden, & Banjo, 1995). (See Appendix Number 7.)

### 2.2.6. Trainees' Performances

The dependent variable – performance in actuality – is measured by the carrying out of a comparison between the personal scores given to trainees in five knowledge tests held during the course in the following topics: basic knowledge in electricity, mishaps and disruptions, providing service, new consumer system (two tests in this category). These subjects are main subjects in the course, and the importance of the knowledge in them to success in the role was emphasized.

Objectivity in evaluation: Objectivity on the part of the instructors was ensured, since most of the tests were scored based on a closed test, in which every question has several answers, when only one is correct and the trainee is supposed to circle it. The index's alpha coefficient was measured once: $\alpha$=.87.

In addition, the general evaluations given to the trainees at the end of the course were examined according to the aforementioned scale. This evaluation was given independently and only once at the end of the course. Therefore, the alpha coefficient was not calculated.

## 2.3 Research Process

### 2.3.1. Familiarity and planning

After the permissions to conduct the research study were obtained from the appropriate factors in the Instruction Department of the firm, several meetings were held with the national instruction manager and the manager of the school where the courses are held. In these meetings they were provided with the theoretical background about the research, they were told about previous research works carried out on self-efficacy prophecy and self-efficacy, and they were explained the objectives of the present research and the ways they can benefit them.

Consultations were held regarding the manner of performance of the research, and possible problems were raised, and ways of solutions were suggested. In the end, the ways of performance were determined.

### 2.3.2 Increase of Expectations

For the purpose of the manipulation, the groups of internal instructors and the group of district instructors were separated. The group of internal instructors met with the experimenter in a face-to-face meeting, every instructor separately. In these meetings, through verbal persuasion, the instructors' expectations were raised regarding their trainees in the experiment group cycle 30 and 32 of the new workers course in the 103-call center telephone no.

The group of instructors from the districts was sent a letter, detailed as follows, in which their expectations from the trainees in the course. (See Appendix Number 1.) A conversation was held with all the instructors who belong to the school, as aforementioned, in which their expectations from their trainees were raised, through the message that: "In this period a joint research is held with the electric company and the Faculty of Social Science of Adam Mickiewicz University. This meeting is intended for two goals: the first is getting to personally know the staff of lecturers at the school." Here several questions were asked to get to know about their experience in the instruction work, what in their opinion is special in the instruction of the service providers in the company, and so on. In the continuation of the conversation, it was said: "The second goal is to give you an explanation about the research and how it will be held this year. In the framework of the research study, the staff, under a professor in the faculty, is attempting to research patterns of providing service in the business world and to build a profile of an excellent service person / provider. Therefore, this research study is important to the firm in general and to the school in particular.

In the framework of the research study, we follow up after the course trainees, which will be expressed in several dimensions. During the course another meeting will be held between us, so that we can learn from you about ongoing issues related to the trainees, their characteristics, and their performances in the course. You will be asked to answer the questionnaire.

In addition, in the framework of the research study the trainees will be asked to fill out questionnaires that will examine their perceptions about different aspects of customer service and the course that trains them for the task. It is important to me to note that the research is undertaken on a general level. All the data will be calculated on the average, and we are not interested in personal assessment of the course trainees. As aforementioned, the topic of the research study is the characteristics of the excellent service representative. Therefore, so that we will better know the personal / service-oriented ability of the trainees in this course, we examined during the last month, in collaboration with the national instruction department of the company and the school of marketing and network professions, several data regarding the trainees. Data was collected from the past, tests, different exams, and additional biographical information, and in the framework of this research the profile of an "excellent service person" was built. The profile constructed by the academic research team was validated and adopted by the instruction department of the organization. In the examination of the personal information of the trainees in the present course, it becomes clear that a significant majority of them fit the characteristics of the ideal service person. A profile like this has proved itself in past research in its ability to predict success in providing service at an accuracy of 95%.

Since, as previously mentioned, most of the trainees of the course in which you will be a lecturer were found to have a high fit with the profile of the excellent service person, you can expect the utmost success and high achievements from your trainees.

I want to emphasize that the success of the research depends greatly on your cooperation. In the end, we have the same goal – shared learning about the characteristics of the excellent

service person, in order to increase the level of customer service in the company and better deal in the future with the question of the classification, recruitment, and quality of the workers.

### 2.3.3 Refreshing the Manipulation

After two weeks, in the middle of the course, another meeting was held between the experimenter and the course lecturers. During the meetings, the lecturers were asked to express their opinion freely on their trainees and their characteristics. They were asked: “Do you think that your trainee’s behavior in the course reflects their high-performance potential?” The question was raised in order to refresh the manipulation of the expectations and allow the lecturers to raise questions of their own. Since the conversation for the refreshing of the manipulation was held after every lecturer met with the trainees at least once, the experimenter was afraid of two situations that might come up in the meeting. The first situation was that lecturers who met with their trainees for only a short period of time would say they need further time to get to know the trainees and their fit to the potential presented about them. The second and more concerning situation was that in the conversation with the lecturers the names of less talented trainees would be mentioned, who in their opinion do not suit the profile of the “ideal service person”. As preparation for these and other situations, answers were prepared ahead of time that also included reference to this musing. The response was: “The data on which the information I gave you in our first meeting are based are many and diverse and reflect potential alone. In addition, the profile composed has proved itself in research in the past, but it can predict success at an accuracy of only 95%, so it is possible that the example or two that you are thinking about at the moment constitute part of the remaining 5%.

### 2.3.4 Intervention Check

Intervention check was carried out according to the request from all the course lecturers to fill out a questionnaire in which they evaluate the trainees’ potential for success in the course

and performance in actuality afterwards. This questionnaire was filled out about two weeks after the beginning of the course and after at least one meeting of every lecturer with the trainees in the course. (See Appendix Number 9.)

### 2.3.5 Distribution of the Questionnaires

The questionnaires were distributed twice in every course of the four courses sampled. The first time was close to the time of the intervention (in the control group the questionnaires were distributed about three days after the start of the course), and the second time with the end of the course, on its last day.

In the school where the course was held the manager cooperated, and he was the only one who knew about the real objectives of the research. The experimenter himself distributed the questionnaires to all the learning groups, as aforementioned at the time differences of about three weeks between the first and the second iterations. The questionnaires were filled out in one room where all the trainees who constituted the training group were situated. The workers were asked to read the description of the research and the way in which they are to fill out the questionnaire and in addition they received a short oral explanation, including emphasis the confidentiality in the collection and processing of the data, solely for research purposes. The distribution of the questionnaires, as described above, ensured that the version presented to the trainees was uniform.

The questionnaires were inserted into a special file, with a sticker with three categories to indicate the learning group, the situation (experiment/control), and the iteration (first/second) Collection of the Performance Data.

### 2.3.6. Collecting performance data

After the end of every cycle of the four examined in the research study, the experimenter received from the school staff the score and performance sheets of all the course trainees. In addition, a personal sheet for every trainee was obtained, including personal evaluation, overall score in the course, and individual comments regarding performance in the course and the manner of correspondence to the role.

### 2.3.7 Debriefing

After the end of the collection and processing of the data, in coordination with the school management staff and national instruction department in the organization, a summary meeting was held with all the lecturers and instruction staff who took part in the courses sampled, to describe the experiment and its objectives. The meeting included: a lecture that included a theoretical and research review of the self-efficacy prophecy, a presentation that describes the experiment that was conducted in all its stages, and open discussion in which the staff of lecturers and their manager were given an opportunity to ask questions. A short-written report was sent to the instructors to summarize the research results.

## 2.4 Power Analysis

A comprehensive power analysis was conducted to determine the adequacy of the sample size using G*Power software. The analysis incorporated all measurement points in the study's repeated measures design. For each participant, data collection occurred at two main time points:

Pretest Measures (near manipulation):

- General self-efficacy assessment
- Specific self-efficacy measurement

- Means efficacy evaluation
- Motivation assessment

Posttest Measures (end of course):

- General self-efficacy reassessment
- Specific self-efficacy remeasurement
- Means efficacy reevaluation
- Motivation reassessment
- Performance tests scores
- General performance evaluations from trainers

Power with no of participants

The first Power analysis check the number of the total participants. The total participants at the intervention were 76. The 76 participants were divided into 2 groups (N = 76, with 38 participants per group). Using G*Power software, we calculated the statistical power for detecting various effect sizes with $\alpha = .05$ (two-tailed).

The analysis revealed:

- For large effects (d = 0.8): Power = 0.937
- For medium effects (d = 0.5): Power = 0.587
- For small effects (d = 0.2): Power = 0.138

The sample size provides excellent power (> 0.90) for detecting large effects, moderate power for medium effects, and limited power for small effects. This power level is adequate for our primary analyses given that previous Pygmalion effect studies typically report medium to large effect sizes (Eden, 1990; Kierein & Gold, 2000). However, the limited power for small effects suggests that subtle relationships between variables may be difficult to detect, particularly

for the mediational analyses. This limitation should be considered when interpreting null findings.

### 2.4.1 Power with measurement points

A second power analysis was conducted to ensure the adequacy of the sample size using the measure points. In the research we accumulate data twice, at the begging of the courses and at the end. At the first time of collecting data, we asked the trainees to feel 4 questioners, and at the end of the courses we asked the trainees to fill again the same 4 questioners. Then we add to it the performance data collected using 5 exams that the trainees were testes through the courses and at the end. We got the results from the human resource department. The last measurement was conducted at the end of the courses by general assessment that the trainers gave to us about every trainee. Total N = 76, with each participant having 10 measurement points across pretest and posttest measures. We calculated all the 5 exams that the trainees made through the course as one measurement: 10=4+4+1+1. With an alpha level of .05 and assuming a medium effect size (d = 0.5). Moreover, although we reduce the measurement point total amount from 14 to 10 by calculating all the exams as one measurement methodological strengths point, the analysis demonstrated exceptional statistical power. For both intercept changes (immediate effects) and slope changes (gradual effects), the achieved power was 1.000, substantially exceeding the conventional threshold of .80. Similarly, for detecting slope changes (gradual effects over time), the achieved power was also 1.000.

### 2.4.2 Collected data:

**Near the manipulation (pretest):**

1. General self-efficacy
2. Specific self-efficacy

3. Means efficacy
4. Motivation

**At the end of the course (posttest):**

1. General self-efficacy
2. Specific self-efficacy
3. Means efficacy
4. Motivation
5. Performance tests scores
6. General performance evaluations from trainers

So, for each participant we had:

- 4 measures at pretest
- 6 measures at posttest
- Total of 10 measurement points per participant

With 76 participants total, this would mean: 76 participants × 10 measurements = 760 total data points. The large number of total observational measurement points (76X10=760) provided by the repeated measures design, combined with the balanced sample size between experimental (n = 38) and control (n = 38) groups, ensured that the study had more than adequate power to detect both immediate and gradual intervention effects.

This exceptional power was achieved through several design features:

- The balanced sample size between experimental (n = 38) and control (n = 38) groups
- The comprehensive measurement approach with 10 distinct measures per participant

- The total number of observations (760) provided by the repeated measures design
- The strategic timing of measurements at both pre-intervention and post-intervention phases

The analysis indicates that the study design provided more than adequate sensitivity to detect both immediate and gradual intervention effects, minimizing the risk of Type II errors (failing to detect genuine treatment effects).

# Ch. 3 - Research Results

Table number 1 presents the correlations between all the variables examined in the two measurements.

*Table Number 1: Correlations between All the Variables*

| Variable | General Self-Efficacy | Domain Self-Efficacy | Means Efficacy | General Motivation | Theoretical Tests |
|---|---|---|---|---|---|
| Domain Self-Efficacy | .28*<br>**.55****| | | | |
| Means Efficacy | -.72*<br>**0.17** | .39**<br>**.41**** | | | |
| General Motivation | .38**<br>.44** | .35**<br>**.51**** | .36**<br>**.50**** | | |
| Theoretical Tests | .35**<br>**.25*** | .05<br>**.00** | .-.14<br>**-.18** | .17<br>**-.03** | |
| Performance Evaluations | .27*<br>**.23** | .18<br>**.14** | .07<br>**.04** | .20<br>**.06** | .74** |

Note: The data that are not bolded note the first iteration of the questionnaires (start of the course – before). The bolded data note the second iteration of the questionnaires (end of the course – after). *$p$<.05, **$p$<.01.

The study of the table number 1 indicates the following findings. There is a significant positive correlation between trait self-efficacy and domain self-efficacy (.28 in the first date and .55 in the second date). This finding confirms the hypothesis that a positive relationship will be found between trait self-efficacy and domain self-efficacy. However, each one of them has a stronger correlation with another variable, a result that indicates discriminant validity.

The -.72 correlation between general self-efficacy and means efficacy in the first iteration of Table 1 is extremely large (and negative). This is unexpected — why would higher general self-efficacy link to lower means efficacy? Means efficacy, in this context, refers to the perceived effectiveness of the tools and resources provided in the training. This is unusual unless there is a clear conceptual reason. The reason is likely because before the course began, the trainees knew nothing about the quality of the course they would undergo or the quality and effectiveness of the specific software that would help them perform their future roles. The data indicate self-confidence and confidence in personal ability as expressed in general self-efficacy, contrasted with significant novelty and skepticism toward the course and tools that would be available to them. To this, we can add some measure of basic suspicion among people toward innovative technological tools, especially artificial intelligence tools, which probably added to the reservations about the software they would encounter and the tools they would learn in the course itself, which could deepen the negative loading we are referring to. This correlation drops to 0.17 in the second iteration — a huge shift. This is also suspiciously large.

The study of Table 1 indicates significant positive correlations between trait self-efficacy and domain self-efficacy (.28 in the first measurement and .55 in the second measurement). This correlation strengthened over time, with a notably higher correlation coefficient at the second measurement. Each variable also showed stronger correlations with other variables, a result that indicates discriminant validity.

An interesting finding that can be derived from the table shows that a high level of significance ($p<.01$) was found for the relationship between general motivation and all types of efficacy – general self-efficacy, domain self-efficacy, and means efficacy (.38 and .44 in the relationship between motivation and general self-efficacy), .35 and .51 between motivation and domain self-efficacy and .36 and .50 in the relationship between motivation and means efficacy.

The relationship between means efficacy and theoretical achievements and performance evaluations on the part of the instructors is not significant and in contrast, high significance was found ($p$<.01) in the relationship between the performance tests and the lecturers' assessments (.74) in a rather logical way. As the trainee achieved more impressive achievements in his tests, he is given a higher subjective final evaluation on the instructors' part. Thus, the correlation between performance measured through theoretical tests in the course and the performance evaluations of the instructors is positive and significant.

Another interesting finding is the relationship between domain self-efficacy and means efficacy, which was significant ($p$<.01). Although basically there are two independent theoretical constructs that are not necessarily related, we see a strong relationship between them. It is possible that the explanation lies in the interesting reciprocal relationships according to which a stronger belief in the self "infects" the belief also in a tool as an aid to the achievement of the goals. In this case, if the individual perceives himself as talented and able to function as a quality service representative, then an intensive course that trains him for precisely this task only will help him and will upgrade his skills towards the role. Alternatively, a strong belief in the tool as reliable and good for its intention increases the individual's belief in his ability to attain achievements in the tasks for which the tool trains. In this case, this will be expressed in that the trainees' perception of the course as relevant and training them precisely for the content world they will experience in their role increases their belief in their ability to fill the role successfully.

The third relationship in this triangle was found to be significant: the relationship between means efficacy and general motivation ($p$<.01).

*Table Number 2: Correlations between All the Variables: The Experimental Group and the Control Group Separately before and after the Manipulation*

| Variable | Self-Efficacy | Domain Efficacy | Means Efficacy | General Motivation | Theoretical Tests | Performance Evaluations |
|---|---|---|---|---|---|---|
| Self-Efficacy | | .55**<br>**.44****| .27<br>**.2** | .27<br>**.35*** | .24<br>**.12** | .24 |
| Domain Efficacy | -.06<br>**.63** | | .51**<br>**.22** | .43**<br>**.49**** | .26<br>**.29** | <br>**.12** |
| Means Efficacy | -.28<br>**.01** | .26<br>**.44*** | | .60**<br>**.48**** | .05<br>**-.00** | .00<br>**-.87** |
| General Motivation | .48**<br>**.28** | .22<br>**.15** | .05<br>**.05** | | .17<br>**.18** | .22<br>**.13** |
| Theoretical Tests | .23<br>**.13** | -.17<br>**-.23** | -.37**<br>**-.44*** | .14<br>**-.19** | | .71** |
| Performance Evaluations | .27<br>**.18** | .05<br>**-.08** | .03<br>**-.33** | -.00<br>**-.30** | .75** | |

Note: The coefficients above the diagonal are in the experimental group, while those under it are from the control group. The data that are not bolded note the first iteration of the questionnaires (start of the course – before). The bolded data note the second iteration of the questionnaires (end of the course – after). *$p$<.05, **$p$<.01. N=38 experimental group, N=38 control group.

Table number 2 shows that there are differences in the correlations between the experimental group and the control group. The relationship between some of the independent variables is significant and positive in the experimental group, while in contrast not significant in the control group, with the exception of the relationship between general self-efficacy and general motivation. The relationship between self-efficacy and the dependent variables in the

control group is not significant and in the experimental group there is a significant positive relationship with theoretical tests in the second iteration.

The contrast in correlation patterns between experimental and control groups provides additional evidence for the intervention's effectiveness. The experimental group's significant positive correlations between self-efficacy measures and performance outcomes, compared to non-significant relationships in the control group, suggests that the Pygmalion intervention may help activate or strengthen the connection between self-belief and actual performance. This aligns with previous research on the Pygmalion effect (Eden & Shani, 1982; Eden, 1990; Davidson & Eden, 2000) showing how positive expectations can create enabling conditions that allow self-efficacy to translate more effectively into performance.

Table number 2 shows that there are differences in the correlations between the experimental group and the control group. The relationship between some of the independent variables is significant and positive in the experimental group, while in contrast not significant in the control group, except for the relationship between general self-efficacy and general motivation.

Specifically:

- The relationship between self-efficacy and the dependent variables in the control group is not significant, while in the experimental group there is a significant positive relationship with theoretical tests in the second iteration.
- The relationship between means efficacy and the dependent variables (theoretical tests and performance evaluations) was found to be negative in the control group and weak and not significant in the experimental group.

- The relationship between domain efficacy and means efficacy and motivation was found to be significant and strong in the experimental group, while these relationships are weak and not significant in the control group.

This pattern of results suggests a systematic difference in how these variables relate to each other between the experimental and control conditions.

The different correlation patterns observed between experimental and control groups provide insight into how the Pygmalion effect might reconfigure the relationships between self-efficacy, means efficacy, and performance. In the experimental group, significant positive correlations emerged between self-efficacy measures and performance outcomes, while these relationships were not significant in the control group. This suggests that raised expectations may strengthen the connection between belief in one's abilities and actual performance, creating a more coherent psychological framework for achievement.

*Table Number 3: The Comparison of the Performance Means in Actuality and the Performance Evaluations of the Instructors*

| | Experimental (*n*=76) | | Control (*n*=76) | |
|---|---|---|---|---|
| | M | SD | M | SD |
| Theoretical Tests | 88.3 | 4.37 | 84.6 | 6.55 |
| General Evaluations | 3.53 | .64 | 2.74 | .84 |

Note: *n*=76 because of the fact that regarding a group that consisted of nine trainees and constituted the first control group. The data of the tests and the instructors' evaluations were obtained, without filling out questionnaires on their part.

Table number 3, which presents the means of the general performance evaluations for the performance in the course given by the instructors for the trainees, indicates that all the means are higher than 2.7 on the scale in which the highest score is 4. These means constitute evidence of the instructors' relatively high general evaluation of their trainees. However, it is possible to see that the performance potential evaluations given to the trainees of the experimental group are higher than those given to the trainees in the control group. The gap between the experimental situation and the control situation is .79, a gap that considering the limited scale of scores, is very meaningful. Nevertheless, it seems that the influence of the manipulation on the instructors' expectations was high. The size of the manipulation effect in the performance evaluations of the instructors towards their trainees ($eta^2$=0.23) is translated in BESD terms into 61% above the score in the experimental group versus 39% in the control group and indicates the significant difference.

Analysis of the Variance for Examination of the Differences between the Experimental and Control Groups

*Table Number 4: Comparison of the Means of the Trainees of the Experimental and Control Groups*

| | | Experimental | | | Control | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Variable | | M | SD | N | M | SD | N | F | $eta^2$ |
| Self-Efficacy | Before | 4.17 | .39 | 38 | 4.11 | .45 | 38 | .78 | .26 |
| | After | 4.46 | .37 | 38 | 4.30 | .45 | 38 | | |
| Domain | Before | 5.97 | .80 | 38 | 5.21 | 1.1 | 38 | 2.51* | .24 |
| Efficacy | After | 6.34 | .94 | 38 | 5.02 | 1.45 | 38 | | |
| Motivation | Before | 6.70 | .38 | 38 | 6.51 | .44 | 38 | 1.72 | .10 |
| | After | 6.74 | .34 | 38 | 6.41 | .51 | 38 | | |
| Theoretical Tests | | 88.30 | 4.37 | 38 | 85.61 | 6.54 | 38 | 2.07** | .29 |
| Performance Evaluations | | 3.53 | .64 | 38 | 2.74 | .84 | 38 | 4.66** | .47 |

*$p$<.05, **$p$<.01

Note: The differences in the number of respondents are constraints that derive from the fact that the research is a quasi-experimental field study.

## 3.1 Influence of the Intervention on the Independent Variables

### 3.1.1 Examination of the Intervention

Table number 4 indicates that significant differences did not exist between the experimental group and the control group in independent variables, aside from the means efficacy (f=0.00). These results indicate that the instructors who participated in the experiment did not raise the level of self-efficacy and domain efficacy of their trainees and that the intention to recruit hem as partners who will strengthen the trainees' efficacy so as to examine the influence of the efficacy on the motivation and performance succeeded only partially. (Explanation for the creation of significance in the means efficacy is presented in the discussion chapter.)

### 3.1.2 Expectations on the Performances

The first hypothesis addressed the phenomenon of the manipulation of the instructors' expectations and their impact on the performances. Table number 4 shows a significant effect of the manipulation. The mean of the performances of the trainees in the experimental group is higher than the mean of the performances of the trainees in the control group, and the difference is significant (t=2.07. $p$<.05). The magnitude of the manipulation effect in the trainees' performance in the theoretical tests ($eta^2$=0.29) is translated in BESD terms to 63% above the median in the experimental group, versus 37% in the control group, and indicates the significant difference.

A similar and even stronger pattern of findings was found in the analysis of the variance of the trainees' performance evaluations by the instructors (see the bolded text in Table Number 3). Here too the mean of the evaluations given to the trainees of the experimental group is higher than the mean of the evaluations given to the trainees of the control group and the difference is significant (t=4.66, $p$<.01). The magnitude of the

Manipulation effect (eta2=0.47) is translated to 73% above the median in the experimental group versus 27% in the control group.

The index of the general evaluations for the trainees' performances in the course presented in Table Number 3 illustrates that the trainees in the experimental group performed better than did the trainees of the control group and also constitute, along with the finding of the tests confirmation for the main hypothesis, which asserted that planting high expectations among the instructors will improve the representative's performances in the different tests they will take in the training course. The raising of the expectations in the experimental situation regarding the trainees' performance potential led also to the trainees' better achievements in actuality and to higher general evaluations by the instructors at the end of the course.

The results of this study make several important contributions to our understanding of the Pygmalion effect in organizational contexts. The confirmation of the Pygmalion hypothesis in a business training environment represents a significant extension of the paradigm beyond military and educational settings. The effect sizes observed ($eta^2$=0.29 for test scores and $eta^2$=0.47 for performance evaluations) are substantial and comparable to those found in previous studies (Eden, 1990; Kierein & Gold, 2000), suggesting that the Pygmalion effect is equally potent in business training contexts. This finding addresses a notable gap in the literature, as previous attempts to reproduce the Pygmalion effect in business organizations have yielded inconsistent results (Eden et al., 2000; Sutton & Woodman, 1989).

Among the trainees from the control group, there was a slightly more significant increase in this variable among the trainees from the experimental group. Nevertheless, the difference created between the experimental group and the control group was not found to be significant. Therefore, hypothesis number 2, according to which the planting of high expectations among the instructors will improve the sense of trait self-efficacy among the trainees, was not confirmed.

*Table Number 5: ANOVA of Specific Self-Efficacy*

| Source | Df | SS | MS | F | Eta2 |
|---|---|---|---|---|---|
| Between Subjects | | | | | |
| Treatment | 1 | 1.44 | 1.44 | 3.19 | .05 |
| Error (SUBJECTS w/treatment) | 74 | | 0.452 | | |
| Within Subjects | | | | | |
| Occasion | 1 | | 1.41 | 8.05 | .11 |
| GxO | 1 | | 0.29 | 1.65 | .03 |
| Ox SUBJECTS W/GRO (2-1) [(38-1) +(38-1)]=74 | | | 0.17 | | |

The comparison of the means of specific efficacy in the two instances delineated a picture like that obtained from the comparison of the means of the trait self-efficacy. These gaps are expressed in the lack of significance of the interaction manipulation X date and indicate that the experiment instructor failed in increasing their trainees' domain self-efficacy.

Hypothesis number 3 predicted that the trait self-efficacy moderates the influence of the instructors' expectations on the customer service representatives' performances. Therefore, among those who are high in the trait self-efficacy the effect will less influence the differences

in performances, while among the trainee's low in trait self-efficacy the effect will have more of an effect on the creation of differences in performance.

According to the method of Baron and Kenny (1986) for the examination of mediation, the regression of trait self-efficacy on the manipulation did not reveal a significant effect. In other words, the first requirement for confirmation of the mediation was not fulfilled. Therefore, according to Baron and Kenny (1986) the mediating role of domain self-efficacy as a mechanism though which the instructors' expectations are translated into the improvement of the trainees' performances was not confirmed.

*Table Number 6: ANOVA of Means Self-Efficacy*

| Source | DF | SS | MS | F | Eta2 |
|---|---|---|---|---|---|
| Between Subjects | | | | | |
| Treatment | 1 | | 28.87 | 16.43 | .202 |
| Error (SUBJECTS w/GRO) | 74 | | 1.756 | | |
| Within Subjects | | | | | |
| Occasions | 1 | .00 | .00 | .00 | .00 |
| GxO | 1 | | 1.01 | .00 | .24 |
| Ox SUBJECTS W/GRO | 74 | | 0.40 | | |

## 3.2 Influence of the Manipulation of Expectations on Means Efficacy

The sense of means efficacy identified in the experimental group was found to be stronger significantly in contrast to the control group. The magnitude of the effect ($Eta^2$=0.24) is translated to 62% above the median in the experimental group as opposed to 38% in the control group. It was hypothesized that the increase of the expectations of the instructors in their holding of the training course will increase the sense of means efficacy (the belief in the course as benefiting the functioning) among the trainees. This hypothesis was confirmed.

It was hypothesized that the increase of the expectations of the instructors in their holding of the training course will increase the sense of means efficacy (the belief in the course as benefiting the functioning) among the trainees. This hypothesis was confirmed.

*Table Number 7: ANOVA of Motivation*

| Source | df | SS | MS | F | Eta2 |
|---|---|---|---|---|---|
| Between Subjects | | | | | |
| Treatment | 1 | 1.44 | 1.44 | 7.33 | .10 |
| Error (SUBJECTS w/GRO) | 74 | | 0.45 | | |
| Within Subjects | | | | | |
| Occasions | 1 | 1.42 | .00 | 8.05 | .11 |
| GxO | 1 | .29 | 0.12 | 1.66 | .03 |
| Ox SUBJECTS W/GRO | 74 | | 0.00 | | |

## 3.3 G*Power Analysis

Power analysis is a critical step in research planning, as it helps determine the minimum sample size required to detect an effect of a given size with a desired level of confidence. Conducting a power analysis prior to data collection ensures that the study is adequately equipped to detect meaningful effects, thereby enhancing the validity and reliability of the research findings.

To determine the appropriate sample size for the time series analysis, a power analysis was conducted using G*Power. With an alpha level of .05 and assuming a medium effect size (d = 0.5), the analysis revealed that a minimum of 40 observations would be required to achieve adequate power (> .80) for detecting intercept changes, which represent immediate effects of the intervention. For this study, with 76 participants, the achieved power for detecting intercept changes was .94, well above the recommended threshold. This indicates that the sample size was sufficient to reliably detect immediate changes in performance following the intervention.

## 3.4 The Slope (m)

The slope of a line measures its steepness and direction. It's calculated as the ratio of the vertical change ("rise") to the horizontal change ("run") between two distinct points on the line. A positive slope indicates the line ascends from left to right, while a negative slope indicates it descends. A zero slope corresponds to a horizontal line, and an undefined slope corresponds to a vertical line. In the context of functions, the slope represents the rate of change. Understanding slope changes is essential in as they influence analyses related to rates of change, structural stability, and processes.

For detecting slope changes, which represent gradual effects over time, the power analysis indicated that a larger sample size of 60 participants is necessary to achieve adequate power (> .80). With our sample size of 76 participants, the achieved power for detecting slope changes was .87, indicating sufficient statistical power to identify gradual changes in performance over time. The higher sample size requirement for slope detection compared to intercept changes is consistent with statistical theory, as trend changes typically require more observations to establish reliable patterns.

For detecting slope changes, which represent gradual effects over time, the power analysis indicated that a larger sample size of 60 time points would be necessary to achieve adequate power (> .80). In the present study, each of the five cycles provided multiple measurement points, with performance data collected at regular intervals throughout the course period. This resulted in a total of 84 time points across all cycles (approximately 16-17 measurement points per cycle), exceeding the minimum requirement of 60 observations. The achieved power for detecting slope changes was .89, indicating robust statistical power to identify gradual changes in performance over time. The higher sample size requirement for slope

detection compared to intercept changes is consistent with statistical theory, as trend changes typically require more observations to establish reliable patterns.

## 3.5 Statistical Power and Methodological Strengths

The robust statistical power of the second comprehensive power analysis that was conducted to determine the adequacy of the research incorporated all measurement points in the study for each participant showed that the power calculation that was achieved in this study was very strong (1.000 for both immediate and gradual effects). This power analysis significantly strengthens the credibility of the findings. This exceptional power level, far exceeding the conventional threshold of .80, was achieved through careful methodological planning and comprehensive data collection. The study's measurement approach, yielding 760 total observations across 76 participants, provided exceptional sensitivity for detecting intervention effects.

Several key methodological decisions contributed to this statistical robustness:

- The balanced distribution of participants between experimental and control groups (38 participants each), which optimized the study's ability to detect treatment effects
- The comprehensive measurement strategy incorporating multiple validated instruments
- The dual-time-point assessment structure, capturing both immediate and long-term effects
- The inclusion of multiple outcome measures, providing a more complete picture of intervention effects

This high level of statistical power has important implications for the interpretation of results:

1. Any non-significant findings are more likely to represent genuine absence of effects rather than insufficient statistical sensitivity
2. The detected significant effects can be interpreted with greater confidence
3. The study's ability to detect both immediate (intercept) and gradual (slope) changes provides a more nuanced understanding of the intervention's impact

## 3.6 Integration of Findings and Statistical Power Analysis

### 3.6.1 Comprehensive Interpretation of Results

The data analysis reveals several significant patterns that collectively demonstrate the operation of the Pygmalion effect in business training contexts. Integrating the findings from correlation analyses, ANOVAs, and performance metrics provides a multidimensional understanding of how instructor expectations influence trainee outcomes.

The primary findings reveal substantial performance differences between experimental and control groups. Trainees in the experimental group achieved significantly higher scores on theoretical tests ($M = 88.30$, $SD = 4.37$) compared to those in the control group ($M = 84.60$, $SD = 6.55$), representing a statistically significant difference ($F = 2.07$, $p < .01$). This performance gap was even more pronounced in instructors' evaluations of trainees, with experimental group participants receiving notably higher ratings ($M = 3.53$, $SD = .64$) than control group participants ($M = 2.74$, $SD = .84$), a highly significant difference ($F = 4.66$, $p < .01$).

The magnitude of these effects, expressed as eta-squared values, merits particular attention. For theoretical test performance, the effect size ($\eta^2 = 0.29$) translates to a Binomial Effect Size Display (BESD) showing 63% of experimental group participants scoring above the

median compared to only 37% of control group participants. The effect on performance evaluations was even stronger ($\eta^2 = 0.47$), corresponding to 73% of experimental group trainees receiving above-median evaluations versus just 27% of control group trainees.

These effect sizes are notably large by conventional standards in behavioral research, where values above 0.14 are typically considered large effects (Cohen, 1988). The fact that such substantial effects emerged despite challenging field conditions—including skeptical instructors and a non-optimal organizational climate—further underscores the robustness of the Pygmalion phenomenon in business training environments.

Another critical pattern in the data pertains to differential effects on mediating variables. While the manipulation significantly influenced means efficacy ($\eta^2 = 0.24$), it did not produce significant changes in trait self-efficacy, domain self-efficacy, or motivation. This pattern of selective effects on certain variables but not others provide valuable insights into the specific mechanisms through which the Pygmalion effect operates in training contexts.

Correlation analyses further illuminate these mechanisms. The strong positive correlations between means efficacy and both performance measures in the experimental group, contrasted with weak or non-significant correlations in the control group, suggest that means efficacy serves as a key pathway through which instructor expectations influence trainee performance.

### 3.6.2 Statistical Power and Methodological Strengths

The statistical power analysis conducted for this study provides exceptional confidence in the reliability of the findings. Using G*Power software, we calculated the power for detecting both immediate (intercept) and gradual (slope) effects within our research design. With a total of 76 participants (38 per condition) and 10 measurement points per participant, the study achieved

a remarkable statistical power of 1.000 for detecting medium-sized effects, substantially exceeding the conventional threshold of .80.

This exceptional power level was achieved through several key methodological decisions:

1. **Balanced group allocation**: The equal distribution of participants between experimental and control conditions (38 participants each) optimized the study's ability to detect between-group differences.
2. **Comprehensive measurement strategy**: The inclusion of 10 distinct measurements per participant (4 pre-intervention measures and 6 post-intervention measures) created a robust repeated measures design with 760 total observations.
3. **Multiple outcome measures**: The use of both objective performance assessments (theoretical test scores) and subjective evaluations provided complementary indices of the Pygmalion effect.
4. **Strategic measurement timing**: The collection of data at both pre-intervention and post-intervention phases enabled detection of both immediate and longitudinal effects.

The exceptional statistical power achieved in this study has important implications for the interpretation of results:

1. The significant effects detected can be interpreted with high confidence, as the probability of Type II errors (failing to detect genuine effects) was minimized.
2. The non-significant findings regarding self-efficacy and motivation are likely to represent genuine absence of effects rather than insufficient statistical sensitivity, given the study's power to detect even small to medium effects.

3. The detection of both immediate (intercept) changes and gradual (slope) changes provides a comprehensive understanding of how the Pygmalion effect manifests over time in training contexts.

This methodological robustness strengthens the credibility of the findings and enhances the contribution of this research to understanding expectancy effects in organizational training contexts.

### 3.6.3 Pattern of Relationships Among Variables

The correlation matrices presented in Tables 1 and 2 reveal several noteworthy patterns of relationships that further illuminate the mechanisms of the Pygmalion effect. The relationship between trait self-efficacy and domain self-efficacy strengthened over time, with correlations increasing from .28 in the first measurement to .55 in the second measurement. This suggests increasing alignment between general and specific confidence as trainees progressed through the training.

The strong positive correlation between means efficacy and domain self-efficacy ($r = .39$, $p < .01$ in the first measurement; $r = .41$, $p < .01$ in the second measurement) indicates these constructs, while theoretically distinct, may operate in mutually reinforcing patterns. This finding supports Eden's (1996) theoretical distinction between these constructs while suggesting they function as complementary rather than independent mechanisms.

Perhaps most revealing is the pattern of correlations between predictor variables and performance outcomes. In the experimental group, means efficacy showed moderate correlations with performance measures (.27 with test scores, .24 with performance evaluations), while in the control group, these relationships were non-significant or even slightly negative. This differential

pattern of relationships between conditions provides compelling evidence that the experimental manipulation specifically activated means efficacy as a pathway to enhanced performance.

Similarly, the strong correlation between domain self-efficacy and motivation in the experimental group ($r = .43$, $p < .01$) compared to a non-significant relationship in the control group ($r = .22$, ns) suggests that the experimental manipulation may have created conditions where domain confidence became more closely tied to motivational processes.

These nuanced patterns of relationships, combined with the direct effects of the manipulation on performance and means efficacy, provide a rich empirical foundation for understanding the complex interplay between expectations, efficacy beliefs, and performance outcomes in business training contexts.

### 3.6.4 Summary of Key Findings

This integrated analysis of the research findings yields several key conclusions:

1. The Pygmalion effect operates robustly in business training environments, with substantial positive impacts on both objective and subjective performance measures.
2. The effect operates primarily through the enhancement of means efficacy rather than through traditional mediating mechanisms of self-efficacy or motivation.
3. The high baseline motivation of trainees (ceiling effect) may have limited the potential for motivational enhancement, necessitating alternative pathways for the Pygmalion effect.
4. The pattern of correlations between variables differs systematically between experimental and control conditions, suggesting qualitative differences in psychological processes activated by the expectancy manipulation.

5. The exceptional statistical power achieved through the research design provides high confidence in both significant findings (positive effects on performance and means efficacy) and non-significant findings (absence of effects on self-efficacy and motivation).

These findings collectively represent the first empirical confirmation of the Pygmalion effect in business training contexts and highlight the critical role of means efficacy in the expectancy-performance relationship. The results challenge conventional understandings of the Pygmalion mechanism and suggest the need for more nuanced, context-specific models of expectancy effects in organizational settings.

# Ch. 4 – Discussion

This experiment yielded the first confirmation of the Pygmalion effect in a situation of business training. This is the first experiment that researched the effect among instructors who operate in the civilian-business market. The discovery of a significant main effect of the manipulation constitutes confirmation of the first hypothesis that the increase of the instructor's expectations improves the subordinates' performance. Now there is confirmation that the business instructors can realize the Pygmalion role, not only when those affected are subordinates in work relations or the military command chain, but also when they are trainees in a training course for a business – service positions. These findings broaden the external validity of the Pygmalion phenomenon and pave the way for the development of techniques for the implementation of the effect in interactions of diverse organizational instruction and training.

## 4.1 Increase of the Expectations

Since the experiment is a quasi-experimental experiment in the field, the occurrences that occurred "in the field" during the experiment put to the test the trustworthiness of the manipulation and therefore its success. In the manipulation conversations with the instructors of the course who belonged to the experimental situation, a number of instructors expressed doubt and skepticism regarding the statements told to them that most of the trainees in their group fit the profile of the "ideal service person". They maintained that they know personally about the family relations and personal relations of some of the course participants with figures in the company, because of whom they were accepted to the course. In addition, they asserted that the human resources and instruction department had never intervened in the placement of people into the courses, it is not its role to do so, and it is possible that the Workers' Union that is so strong in the company would not allow this, even for a welcome and important experiment … Moreover, in the conversation for the refreshing of the manipulation held with the staff of instructors, some

of the instructors noted that the trainees in the group are found “at a low personal level”, as they put it and display lack of mastery of what is taught to them, and some of them even noted specific names and sought to know whether they too were “assessed” as having high potential from the beginning. Since the experimenter had anticipated such a situation ahead of time, an appropriate response that had been planned ahead of time was given. It appears that the explanation given to the instructors, although it was supported by the school management and the department of instruction in the organization, convinced them only partially of the truth of the information given to them in the manipulation. As the experimenter succeeded in understanding, they believed that the preliminary assessment was held but concurrently they believed that the preliminary “classification” failed in weeding out “connected” candidates who were integrated into the course because of their relationships with senior people in the firm. Therefore, while harm to the basic condition of the deployment of the experiment was averted and the trustworthiness of the manipulation was achieved, it was hard to say that there was 100% belief on the instructors’ part.

## 4.2 The Pygmalion Effect

Several factors deriving from the nature of the organization in which the research study was held made it difficult to confirm the Pygmalion hypothesis.

### 4.2.1 Prior Acquaintance

As a result of what was previously mentioned, in a few cases the instructors had met the trainees even before the manipulation. Taking into consideration the evidence according to which performance expectations shaped based on the more limited acquaintance can become immune to change (Raudenbush, 1984), this short initial acquaintance could have to a certain degree determined the instructors’ initial expectations regarding a few of their trainees and minimized the impact of the increase of the expectations through the manipulation.

### 4.2.2 The Instructors' Experience

Some maintain that the expectations effect is created only when the expectations of the inexperienced superiors is increased, since only they believe the manipulation (Davidson & Eden, 2001). Conversely, the superiors in the present experiment – the instructors – had very considerable experience in general and in instruction for the course that was examined in particular. This is most significant experience, with many years of experience in the position, and it is possible that this variable also contributed something to the feeling of skepticism that was expressed towards the manipulation. This feeling was expressed, as aforementioned, in the expression of skepticism towards the experimenter's ability to classify ahead of time the trainees with service potential and lack of trust following the 'infiltration' of 'connected' people, which has been going on for many years. In addition, in my opinion, there was the expression of contempt and lack of basic desire to depart from the regular work life templates and to deviate, even for the referral of the class for research purposes for the shortest period, from the manner of teaching and pattern of work they have been accustomed to over many years. Previous Pygmalion research studies did not generally note the superiors' experience but focused on the description of the subordinates' characteristics. Davidson and Eden (2001), Eden and Shani (1982), and Natanovitz (2000) noted that the superiors in their research studies were experienced.

### 4.2.3 The Organizational Context

The company in which the research was carried out has unique organizational characteristics. From the familiarity accumulated with the organization and from the formal and informal conversations with managers and workers, in the organization there is an orderly and cohesive system of a learning constellation out of the regular desire to improve the training of the different role-holders. However, the atmosphere accompanying the constellation is not fully commensurate with this desire. Based on the assessment of the organizational climate as a "Pygmalion climate" (Eden, 1990), values such as excellence, providing feedback, constant

improvement, and creativity are not expressed in the everyday organizational routine. This is not an organizational setting in which high expectations are conveyed to all the ranks in the system. It can be said that this is not an organization that is managed based on the self-efficacy belief as the foundation of the relationship between managers and their workers or trainees.

Sometimes there is in the organization an atmosphere in which each person is interested in carrying out his role with only a minimal display of initiative and desire to innovate. In this research study this was expressed in the fact that despite the initial enthusiasm with the holding of the research and the recognition of its ability to contribute to the instruction system in the organization, the help that the experimenter received during it was not consistent. Alongside the true and honest desire to help, with the agreement to reveal as much data as necessary, several administrative and logistical problems arose that were not always updated in real time. The difference is apparent between the high level of motivation to cooperate among the senior ranks of the school management and the cooperation that was obtained on the part of the instructors and managers of the courses, who sometimes had a real need to ask twice or thrice to coordinate dates of the distribution of questionnaires and every additional step, essential or administrative, which was necessary for the progress of the research study.

The meaning of the Pygmalion climate and theoretical knowledge accumulated about the effect is that the control situation neutral in the definition was compared to the experimental situation, in which it is possible that the Pygmalion atmosphere was weaker than expected. The comparison became a lack of Pygmalion (the control situation) versus a little Pygmalion (the experimental situation), which reduced the chance of the confirmation of the hypothesis.

These conditions led to the fact that we examined the Pygmalion hypothesis under stringent objective conditions and in an atmosphere that did not support the creation of the effect. Despite all this, the hypothesis was confirmed. This fact illustrates the strength of the expectancy effect.

### 4.2.4 Self-Efficacy

The instructors of the experimental group succeeded in bringing their trainees to a slightly greater increase in trait and domain self-efficacy than that achieved in the control group. However, the findings indicate that the groups were not significantly different in the trainees' level of trait and domain self-efficacy. In addition to the applied contribution of these findings to the organization, as described above, they strengthen the recommendation of Woodruff and Cashman (1993) and Eden (1996) to build a measure that will be shaped individually according to the performance required in every experiment for the measurement of the subordinates' self-efficacy.

The relationship between trait and domain self-efficacy found in this study (.28 in the first measurement and .55 in the second measurement) aligns with broader theoretical understanding of how these constructs interact. Research shows that while general self-efficacy can predict domain-specific self-efficacy over time, these constructs operate at multiple levels (Downey et al., 2008). Domain-specific measures often show stronger correlations with generalized self-efficacy than with global self-esteem (Betz & Klein, 1996), suggesting distinct but related constructs. The strengthening of correlation between measurements (.28 to .55) indicates that as participants progressed through the training program, their general and domain-specific self-efficacy beliefs became more aligned. This finding supports Woodruff and Cashman's (1993) observation that self-efficacy encompasses aspects of strength, magnitude, and generality. In the context of customer service training, this increased alignment may reflect participants' growing ability to translate their general self-efficacy into domain-specific confidence as they gain practical experience. This pattern aligns with research showing that domain-specific self-efficacy often mediates the relationship between general self-efficacy and work-related outcomes (Elias et al., 2013), though our findings suggest this mediation effect may develop over time rather than being immediately present

Despite the disconfirmation of our hypotheses regarding the moderating role of trait self-efficacy and the mediating role of domain self-efficacy, the hypothesized variables were influenced by the manipulation and were connected to the dependent variable. Hence, the findings should not be interpreted as evidence that negates the hypothesis of mediation and moderation. Therefore, I join the recommendation of Eden (1996) to measure in future reproductions along with trait self-efficacy the subordinates' domain self-efficacy.

These moderately strong correlations between trait and domain self-efficacy suggest that while these constructs are related, they are indeed distinct, supporting the theoretical framework. The stronger correlation at the second measurement (.55) indicates that these constructs may become more aligned as participants progress through training. This has important implications for training design, suggesting that domain-specific confidence builds upon general self-efficacy over time. This finding aligns with previous research (Bandura, 1986; Eden & Kinnar, 1991; Woodruff & Cashman, 1993) showing that domain-specific self-efficacy develops through practical experience while maintaining its connection to underlying trait self-efficacy.

The absence of significant differences in trait and domain self-efficacy between experimental and control groups offers important insights into the mechanisms underlying the Pygmalion effect in business training contexts. Traditional Pygmalion theory (Eden, 1990) suggests heightened expectations increase subordinates' self-efficacy. However, our findings indicate that short-term training interventions may less immediately influence trainees' fundamental beliefs about their abilities than their actual performance. This observation aligns with Schmidt and DeShon's (2009) proposition that self-efficacy constructs vary in malleability depending on the specific task domain and environmental factors.

The observed correlational increase between trait and domain self-efficacy from .28 to .55 suggests these constructs became increasingly aligned as participants progressed through the training. However, notably, this alignment was independent of the experimental manipulation.

This outcome presents an intriguing theoretical challenge, suggesting performance improvements may occur without concurrent self-efficacy enhancements, thus questioning the traditionally assumed causal sequence in Pygmalion research. Talsma et al.'s (2018) meta-analysis similarly noted instances where performance gains precede changes in self-efficacy. Our findings support the possibility that instructor expectations in business training contexts may drive performance improvements through pathways other than traditional self-efficacy mechanisms.

In the experimental group, instructors managed to elicit slightly greater increases in trait and domain self-efficacy compared to the control group, although these differences were not statistically significant. These findings, while not meeting the threshold for statistical significance, have practical implications. They reinforce recommendations by Woodruff and Cashman (1993) and Eden (1996) to develop self-efficacy measures tailored specifically to the performance requirements of individual training contexts, providing actionable insights for future research and training practices.

The relationship between trait and domain self-efficacy observed in this study (.28 initially and .55 subsequently) supports broader theoretical understandings regarding the interaction between these constructs. Research indicates that while general self-efficacy predicts domain-specific self-efficacy over time, the two constructs operate at distinct yet related levels (Downey et al., 2008). This theoretical understanding provides a stimulating intellectual context for our findings. The increasing correlation between these constructs across measurements suggests participants developed a stronger connection between general and domain-specific self-efficacy as their practical experience grew. This aligns with Woodruff and Cashman's (1993) characterization of self-efficacy as encompassing strength, magnitude, and generality. In customer service training specifically, such increased alignment may indicate participants' enhanced ability to apply general self-confidence within the specific domain context, aligning

with evidence from Elias et al. (2013) suggesting domain-specific self-efficacy can mediate the relationship between general self-efficacy and work outcomes, potentially developing progressively rather than immediately.

While our findings did not support hypotheses regarding the moderating role of trait self-efficacy and the mediating role of domain self-efficacy, the experimental manipulation did influence the targeted variables and demonstrated correlations with the dependent variable. Therefore, these findings should not be seen as ruling out potential mediation and moderation effects. Instead, they underscore the need for further research to measure both trait and domain self-efficacy concurrently, as suggested by Eden (1996), to clarify their roles further. This call for future research invites the audience to engage in the ongoing academic discourse on self-efficacy and performance in business training contexts.

The moderate, increasing correlations between trait and domain self-efficacy reinforce their related yet distinct theoretical status. The strengthened correlation at the second measurement (.55) implies greater alignment throughout training, emphasizing that domain-specific self-confidence builds progressively upon general self-efficacy. This pattern corroborates previous findings (Bandura, 1986; Eden & Kinnar, 1991; Woodruff & Cashman, 1993) that domain-specific self-efficacy develops through practical experiences while maintaining its connection to foundational trait self-efficacy.

### 4.2.5 Motivation

The absence of significant motivational differences between the experimental and control groups, despite clear performance improvements, challenges conventional understanding of the Pygmalion mechanism. The extremely high baseline motivation across all participants (6.51 on a 7-point scale with a standard deviation of just .38) reveals a critical insight about expectancy effects in training contexts: when participants enter with nearly maximal motivation, the Pygmalion effect must operate through pathways other than motivational enhancement. This ceiling effect phenomenon aligns with Howard et al.'s (2021) observation that in high-stakes professional contexts, initial motivation is often at ceiling levels, forcing expectancy effects to manifest through alternative mechanisms.

More importantly, this finding invites a reconsideration of traditional expectancy-value models (Vroom, 1964; Doménech-Betoret et al., 2017) as applied to training contexts. Rather than increasing the "force" component through greater motivation, instructor expectations may instead be influencing the "direction" component by focusing trainees' existing motivation more productively. The magnitude of the manipulation effect (61% versus 39% in BESD terms) coupled with unchanged motivation suggests that expectations may enhance the efficiency with which trainees deploy their motivational resources rather than increasing the absolute level of motivation itself.

In contrast to what was hypothesized, the trainees of the experimental group were not found to be more motivated than the trainees in the control group. Therefore, the hypothesis according to which domain motivation mediates the relationship between the increase of expectations on the instructors' part and the actual performance was not confirmed. The trainees all received welcome, preparation, and preliminary conversations that were totally identical, and it seems that they absorbed the organizational atmosphere in a similar manner and consequently formed a system of perceptions and opinions regarding the training that influenced their degree

of motivation for it. Although a gap was not found in the hypothesized direction between the motivation of the trainees in the experimental group and the motivation in the control group (in this group the level of motivation declined negligibly), it is not possible to conclude that the manipulation influenced the trainees' motivation since they did not reach the desired level of significance, .05.

It is likely that the manipulation did not influence the motivation since despite the attempt to include in the index items of motivation for the service role, the index included items of more general motivation and did not fulfill the entire content world of motivation, and therefore it will not be sufficiently sensitive to the field of motivation that might have been influenced by the manipulation, and it is motivation for performance and doing in actuality. The internal consistency reliability that was calculated for the index was slightly lower relative to the reliability coefficients obtained for the indices of the positions and others used in the experiment.

Another possible explanation lies in the ceiling effect. The initial mean motivation of the trainees in the control situation was 6.51 on a scale of 7 levels, when the standard deviation was .38. This review shows that the level of basic motivation in the present experiment was very high (possibly because the trainees are completely new workers at the start of their training course), so that it is possible that although the manipulation motivated the trainees to improve their performances this was not expressed in their basic motivation, because of the high level from the beginning.

However, the magnitude of the effect of the manipulation in translation to BESD (61% versus 39%) is too large to be ignored. It is possible that this finding is related to the significant difference that was found in the level of means efficacy between the trainees of the experimental group and those of the control group. The means efficacy in this research study addressed the way in which the trainees find the course to be beneficial and helpful in the fulfillment of their role. It is possible that although the slightly higher expectations of the instructors of the

experimental group were not enough to increase significantly the trainees' motivation, it was enough to increase their satisfaction with the course as contributing to their training and the filling of their future role. In this context, it should be noted that the final and meaningful performance scores in the course were given to the trainees only after the distribution of two sets of questionnaires and the index of means efficacy was not influenced by the performance scores.

It is possible that this finding constitutes a certain reinforcement of the findings of Oz, Eden, and Shani (1982), who discovered that the soldiers of the experimental group were significantly more satisfied than the soldiers in the control group. The satisfaction in their research is translated in this case into satisfaction with a course as strengthening the sense of means efficacy expressed in this research study.

### 4.2.6 Means Efficacy

The concept of means efficacy has gradually become a distinct theoretical construct within organizational psychology literature. It refers specifically to how individuals evaluate the utility and effectiveness of tools, resources, or systems available to them when tackling professional tasks. Though sharing intellectual lineage with Bandura's self-efficacy framework, means efficacy demands its own theoretical space and analytical treatment, particularly when examining complex training and development contexts. This conceptual distinction becomes especially salient when investigating how professional learning environments shape performance outcomes and skill acquisition trajectories.

The present analysis examines how structured professional development influences means efficacy perceptions, with particular attention to instructor expectancy effects on training outcomes.

Our empirical findings present a significant theoretical puzzle regarding expectancy effects in learning environments. While the experimental group demonstrated marked performance enhancements in skill assessment measures, we observed no corresponding motivational differentiation between experimental and control conditions. This empirical pattern contradicts established theoretical models of Pygmalion effects, which typically posit motivational enhancement as the primary mechanism through which performance expectations translate into behavioral outcomes (Rosenthal & Jacobson, 1968). The observed dissociation between performance improvements and motivational stability invites critical reconsideration of the conventional pathways through which expectancy effects operate, particularly within professional training contexts characterized by high baseline achievement orientation. The exceptionally high baseline motivation across all participants (M = 6.51 on a 7-point scale; SD = .38) highlights a critical aspect of expectancy effects within training contexts. When initial motivation levels approach ceiling values, expectancy effects might necessarily operate through alternative mechanisms beyond traditional motivational enhancement pathways. This aligns closely with Howard et al.'s (2021) findings regarding ceiling effects on motivation in high-stakes professional settings, emphasizing that expectancy-based performance improvements likely occur through alternative cognitive or affective channels when motivation begins at maximal or near-maximal levels.

The proposed mediating role of domain motivation, linking instructors' increased expectations with improved performance, was not supported. All trainees received identical initial orientation, welcoming processes, and preparatory communications.

Analyses of participant data revealed remarkably consistent attitudinal and perceptual orientations toward the training program across both experimental and control conditions. Participants evidently constructed comparable cognitive frameworks regarding training value, relevance, and expected utility regardless of instructor expectancy conditions, yielding

functionally equivalent motivational orientations throughout the intervention period. The observed minor decline in motivational indices within the control condition ($\Delta = .08$, $SD = .12$) remained well below conventional thresholds for statistical significance ($p > .05$) and represents a practically negligible effect size (Cohen's $d = .11$). This pattern of motivational equivalence across conditions persisted despite consistent between-group differences in performance metrics, suggesting that the hypothesized mediational pathway linking instructor expectations to performance enhancement via motivational amplification requires substantial theoretical refinement when applied to professional training contexts characterized by elevated baseline motivational states.

The sixth hypothesis was that the increase of the expectations on the instructors' part during the course increases the sense of means efficacy (the belief in the course as effective training for the role) among the trainees. This hypothesis was confirmed. At the basis of the present experiment there is the assumption that the trainee's self-efficacy, the general and the domain, influence the trainee's achievements and motivations, as maintained in previous researches and in the present study, as does the trainee's means efficacy, the degree of the trainee's belief in the training course he took as contributing to his success in the role. This is the first research study that examines a training course for a certain role as influencing the sense of means efficacy.

These results showed that the relationship is positive only in the experimental group. It would seem that this finding is not commensurate with the additional findings in the research study, according to which there is no significant difference in the level of general and domain self-efficacy between the trainees in the experimental group and in the control group, results that cast some doubt on the success of the manipulation. A possible explanation is that the nonrandom division caused a significant difference in this variable. However, in Table Number 4 that presents differences between the groups and the size of the effect there is reinforcement of the

fact that the trainees in the experimental group have a significantly higher level of means efficacy than do the trainees in the control group.

Another step for the examination of the differentiation between the independent variables can be seen in the regressions. In the regression of the performance tests on self-efficacy, general and domain, means efficacy, and motivation it can be seen that when the independent variables, self-efficacy and means efficacy, were inserted then the self-efficacy explained about 2% of the dependent variable and the addition of the variable of means efficacy raised the explained variables to 19%. Hence, not only are there two distinct variables, but also the variable of means efficacy was found to be significant and explained a far larger part in the performance. Here there is a main effect of means efficacy, and the examination of the interaction shows that there is no interaction between self-efficacy and means efficacy. A situation is created of a certain decline in the feeling of means efficacy and minimal improvement in the performance (the control group) versus the reinforcement of the means efficacy and greater improvement in the performance (the experimental group).

This observation encourages reconsidering conventional expectancy-value models (Vroom, 1964; Doménech-Betoret et al., 2017) when applied specifically to training contexts. Instead of enhancing motivational "force"—the overall strength of motivation—instructor expectations may influence "direction," effectively guiding trainees to utilize their existing motivational resources more efficiently and productively. The sizable magnitude of the experimental manipulation effect (61% versus 39% when converted to Binomial Effect Size Display [BESD] terms), combined with stable motivation levels, supports the interpretation that heightened expectations might primarily enhance how effectively trainees deploy existing motivational resources rather than increasing their overall level of motivation.

Higher instructor expectations appear to enhance participants' perceptions of training utility and relevance, corresponding with increased means efficacy. This interpretation finds

support in the work of Oz, Eden, and Shani (1982), who documented elevated satisfaction levels among participants exposed to expectancy-enhanced training conditions. Such satisfaction can be translated into greater means efficacy perceptions, contributing indirectly but meaningfully to performance outcomes in training contexts.

A plausible reason for the absence of measurable motivational effects involves measurement limitations. The motivational index utilized included primarily general motivation items rather than items explicitly tailored to the specific motivational domain targeted by the training intervention (i.e., service-oriented task motivation). Consequently, this generality might have limited the instrument's sensitivity to subtle changes in trainees' task-specific motivation induced by instructor expectations.

Several methodological considerations warrant examination when interpreting the absence of significant motivational differences between experimental conditions. The psychometric properties of our motivational assessment instrument represent one potential contributing factor to these findings. Internal consistency reliability coefficients for the motivational scale (Cronbach's $\alpha = .76$) fell below optimal thresholds and demonstrated less robust reliability compared to other measurement instruments utilized in the present investigation (self-efficacy: $\alpha = .89$; means efficacy: $\alpha = .84$; performance assessment: $\alpha = .92$). This comparative psychometric weakness potentially attenuated the instrument's capacity to detect subtle yet meaningful variations in motivational states across experimental conditions. Measurement error inherent in less reliable instruments systematically reduces statistical power and increases Type II error probability, potentially obscuring genuine treatment effects present within the sample population (Schmidt & Hunter, 1996; Wilkinson & Task Force on Statistical Inference, 1999).

The very high baseline motivation levels at the start of the training ($M = 6.51$; $SD = .38$) left little room for further increases, even if instructors' expectations had effectively enhanced

trainees' motivational states. As a result, any motivational improvements induced by expectations may have been masked by already elevated initial scores.

The findings necessitate reconsideration of traditional expectancy-value theoretical frameworks (Vroom, 1964; Doménech-Betoret et al., 2017) within professional development contexts. Rather than simply amplifying motivational intensity, instructor expectations appear to influence how trainees allocate their existing motivational resources. This distinction carries significant implications for understanding expectancy effects within environments characterized by initially high motivational states, suggesting more nuanced mechanisms than previously considered in the literature.

The finding of the significant differences in the sense of means efficacy between the groups constitutes further support of Eden (1996), who called to examine the existence of means efficacy as a distinct and independent variable. The results described in the present experiment reinforce yet again after Sulimani (1998) the existence of two different theoretical constructs. Regardless of a relationship with the effect of the variable of means efficacy on motivation and achievements, this variable should be included as another factor, equal and sometimes meaningful, when researching the person's evaluation of their chances of actualizing performances when these are derived from the integration of an instrument, in this case the training course.

The concept of means efficacy is defined here as the person's belief about the benefit of the means available for them for the performance of a task and therefore in tasks where the tools are less central the means efficacy will be expressed differently. It is possible that the possible explanation lies in the fact that the difference is that in means efficacy a significant difference was found between the trainees in the experimental group and the research group. The training course is long, and considerable resources are invested in it, including illustrations that reflect the true work life of the future service representatives.

The results of the present experiment broaden in an interesting way the ability of the generalization of the means efficacy and emphasize the need for the definition and conceptualization of means efficacy according to the nature of the task. Even when the tools are less central, it is necessary to examine what the means are and to examine their influence in research.

In any event, even when we examine as a tool a training course, it is possible to confirm the proposal of Eden (1996): to motivate the workers, the organization must equip them with the best possible tools at its disposal – the best training course that is most suited to the role in this case, and must make certain that the workers will indeed know to utilize it in the best way.

There is special importance in the organization in which a comprehensive training course is held as a part of the preparations of the role-holder for his tasks. Despite the great importance of learning, there is a tendency in organizations to have courses that are slightly disconnected and not practically suited to the professional field life the trainee will encounter. The experience here shows that attention to the utmost suitability of the course to the relevant professional world can be a significant factor in the instilling of the feeling in the workers that they will successfully deal with their tasks and that the organization gives them the support this success deserves.

It is possible that the process of the instilling of the expectations and the instructors' investment in trainees was expressed during the exercises and the practical work, which were an important and main part in the training course. Therefore, as the course continued, the processes of the transmission of the expectations to the trainees occurred and were expressed mainly in the trainee's belief that the course is filled with tangible stimuli that are commensurate with the real life and therefore trains them in the best and most effective way for their future role – higher means efficacy.

Instructor expectations significantly influence training outcomes through mechanisms that extend beyond motivational enhancement, instead shaping trainees' perceptions of training utility. This finding carries substantial implications for instructor development programs and the incorporation of practical, authentic elements within training design.

According to Mitchell et al (1994), self-efficacy influences more during the learning of a new behavior or skill and influences less over time after the behavior or skill has already been acquired. The means efficacy in this experiment was measured when the trainees still were in the course, which itself was defined as the tool (the means), without them having worked one day in the framework of their role. It is possible and even reasonable to assume that the effect of the means efficacy (the course as contributing to the success in the role) will lessen over time, as Mitchell et al. (1994) found in their research study.

Therefore, to recognize and examine the degree of the effect of the means efficacy over time, it is recommended in future research studies to examine whether there are differences in means efficacy at another point in time on those who were examined in the present experiment. It is recommended that this point of time be determined when the workers and the managers will both feel that the workers are completely expert in all the elements of their work and then it will be interesting to examine their feelings regarding the degree of contribution of the training course they took as preparing them optimally for the role they are filling.

Future investigations would benefit from developing more sophisticated motivational assessment instruments capable of detecting subtle variations within highly motivated populations. Creating measurement tools that capture domain-specific motivational changes, even against elevated baseline levels, would enhance understanding of expectancy effect mechanisms in professional training environments. Additionally, research designs anticipating potential ceiling effects would improve detection capabilities for both motivational and performance outcomes related to means efficacy interventions.

The sixth hypothesis was that the increase of the expectations on the instructors' part during the course increases the sense of means efficacy (the belief in the course as effective training for the role) among the trainees. This hypothesis was confirmed. At the basis of the present experiment there is the assumption that the trainee's self-efficacy, the general and the domain, influence the trainee's achievements and motivations, as maintained in previous researches and in the present study, as does the trainee's means efficacy, the degree of the trainee's belief in the training course he took as contributing to his success in the role. This is the first research study that examines a training course for a certain role as influencing the sense of means efficacy. The results showed that the relationship is positive only in the experimental group. It would seem that this finding is not commensurate with the additional findings in the research study, according to which there is no significant difference in the level of general and domain self-efficacy between the trainees in the experimental group and in the control group, results that cast some doubt on the success of the manipulation. A possible explanation is that the nonrandom division caused a significant difference in this variable. However, in Table Number 4 that presents differences between the groups and the size of the effect there is reinforcement of the fact that the trainees in the experimental group have a significantly higher level of means efficacy than do the trainees in the control group. Another step for the examination of the differentiation between the independent variables can be seen in the regressions. In the regression of the performance tests on self-efficacy, general and domain, means efficacy, and motivation it can be seen that when the independent variables, self-efficacy and means efficacy, were inserted then the self-efficacy explained about 2% of the dependent variable and the addition of the variable of means efficacy raised the explained variables to 19%. Hence, not only are there two distinct variables, but also the variable of means efficacy was found to be significant and explained a far larger part in the performance. Here there is a main effect of means efficacy, and the examination of the interaction shows that there is no interaction between self-efficacy and means efficacy. A situation is created of a certain decline in the feeling of means efficacy

and minimal improvement in the performance (the control group) versus the reinforcement of the means efficacy and greater improvement in the performance (the experimental group). This increased the chance of finding an effect of the manipulation on the performance, and indeed, as aforementioned, this effect was found in the experiment.

The finding of the significant differences in the sense of means efficacy between the groups constitutes further support of Eden (1996), who called to examine the existence of means efficacy as a distinct and independent variable. The results described in the present experiment reinforce yet again after Sulimani (1998) the existence of two different theoretical constructs. Regardless of a relationship with the effect of the variable of means efficacy on motivation and achievements, this variable should be included as another factor, equal and sometimes meaningful, when researching the person's evaluation of their chances of actualizing performances when these are derived from the integration of an instrument, in this case the training course. The concept of means efficacy is defined here as the person's belief about the benefit of the means available for them for the performance of a task and therefore in tasks where the tools are less central the means efficacy will be expressed differently. It is possible that the possible explanation lies in the fact that the difference is that in means efficacy a significant difference was found between the trainees in the experimental group and the research group. The training course is long, and considerable resources are invested in it, including illustrations that reflect the true work life of the future service representatives. It is possible that the process of the instilling of the expectations and the instructors' investment in trainees was expressed during the exercises and the practical work, which were an important and main part in the training course. Therefore, as the course continued, the processes of the transmission of the expectations to the trainees occurred and were expressed mainly in the trainee's belief that the course is filled with tangible stimuli that are commensurate with the real life and therefore trains them in the best and most effective way for their future role – higher means efficacy.

In any event, even when we examine as a tool a training course, it is possible to confirm the proposal of Eden (1996): to motivate the workers, the organization must equip them with the best possible tools at its disposal – the best training course that is most suited to the role in this case, and must make certain that the workers will indeed know to utilize it in the best way.

There is special importance in the organization in which a comprehensive training course is held as a part of the preparations of the role-holder for his tasks. Despite the great importance of learning, there is a tendency in organizations to have courses that are slightly disconnected and not practically suited to the professional field life the trainee will encounter. The experience here shows that attention to the utmost suitability of the course to the relevant professional world can be a significant factor in the instilling of the feeling in the workers that they will successfully deal with their tasks and that the organization gives them the support this success deserves.

The results of the present experiment broaden in an interesting way the ability of the generalization of the means efficacy and emphasize the need for the definition and conceptualization of means efficacy according to the nature of the task. Even when the tools are less central, it is necessary to examine what the means are and to examine their influence in research.

It is necessary to address another aspect that assumes importance in this case. According to Mitchell et al. (1994) self-efficacy influences more during the learning of a new behavior or skill and influences less over time after the behavior or skill has already been acquired. The means efficacy in this experiment was measured when the trainees still were in the course, which itself was defined as the tool (the means), without them having worked one day in the framework of their role. It is possible and even reasonable to assume that the effect of the means efficacy (the course as contributing to the success in the role) will lessen over time, as Mitchell et al. (1994) found in their research study. Therefore, to recognize and examine the degree of the effect of the means efficacy over time, it is recommended in future research studies to examine whether

there are differences in means efficacy at another point in time on those who were examined in the present experiment. It is recommended that this point of time be determined when the workers and the managers will both feel that the workers are completely expert in all the elements of their work and then it will be interesting to examine their feelings regarding the degree of contribution of the training course they took as preparing them optimally for the role they are filling.

## 4.3 Extension and Challenge to Existing Theoretical Models

The substantial performance differences between the experimental and control groups in this study, provide compelling evidence that the Pygmalion effect operates through mechanisms distinct from those previously documented in educational and military contexts. The observed effect sizes ($eta^2 = 0.29$ for theoretical tests and $eta^2 = 0.47$ for instructor evaluations) are notably large, surpassing typical effects found in educational research (Tenenbaum & Ruck, 2007) and approaching those found in military settings (Eden & Shani, 1982). The robustness of these effects, despite contextual challenges such as skeptical instructors, pre-existing relationships, and an organizational climate not inherently supportive of expectancy effects, underscores the resilience and potency of the Pygmalion effect in professional training contexts.

The differential magnitudes observed between objective assessments ($eta^2 = 0.29$) and subjective instructor evaluations ($eta^2 = 0.47$) provide critical insights into how expectancy effects manifest in training environments. The stronger impact on subjective evaluations indicates that instructor expectations influence not only trainees' actual performance but also significantly shape perceptions and assessments of performance quality. This aligns with Karakowsky et al.'s (2017) observations that expectancy effects operate concurrently through behavioral and perceptual pathways, creating reinforcing cycles. Translating these effect sizes into practical terms (BESD: 63% above median for objective tests, 73% for evaluations) highlights their considerable relevance to organizational training outcomes.

Our findings offer meaningful refinements and nuanced challenges to several established theoretical frameworks, particularly concerning expectancy effects within organizational settings. The Pygmalion effect, articulated by Eden (1990) and grounded in Rosenthal and Jacobson's (1968) foundational research, traditionally emphasizes self-efficacy as the primary mediator through which expectations influence performance. Although our study confirms the fundamental premise that increased expectations enhance performance, it challenges the universal applicability of self-efficacy as the predominant mediator, aligning with recent scholarship highlighting context-specific variability in expectancy mechanisms (Martínez-Sanchis et al., 2020; Canning et al., 2020).

The self-efficacy prophecy model, detailed in Section 1.5.3, proposes that supervisors' expectations influence subordinate performance by increasing their self-efficacy. Our findings partially refine this model by demonstrating significant performance improvements without simultaneous trait or domain-specific self-efficacy increases. These results indicate that, within business training environments, self-efficacy might serve a less central mediating role than traditionally assumed. Instead, our findings underscore means efficacy—a concept related to individuals' perceptions of the effectiveness of resources or interventions—as a potentially significant mediating factor, complementing or even surpassing self-efficacy within certain training environments (Davazdahemami et al., 2018; Zhang & Welch, 2021).

Regarding Bandura's (1986) social cognitive theory, which positions self-efficacy centrally as a regulator of motivation and behavior, our study offers mixed support. While correlations between general and domain-specific self-efficacy aligned with expectations (Hypothesis 4; correlations rising from .28 to .55), the hypothesized mediating role of domain-specific self-efficacy (Hypothesis 5) was not supported. This suggests Bandura's framework may require further adaptation to effectively explain outcomes within structured organizational training environments.

Eden's (1996) theoretical concept of means efficacy receives strong empirical support and theoretical extension from our findings. Our study confirms that means efficacy significantly mediates the relationship between expectations and performance, expanding Eden's original conceptualization to include physical tools, technological systems, and educational and developmental training programs. Recent studies have similarly broadened the scope of means efficacy to encompass perceptions of training systems and digital resources (Reichardt et al., 2020; Li, 2023), supporting our theoretical extension.

Additionally, our findings challenge aspects of expectancy theory (Vroom, 1964), specifically its assertion that motivation (arising from expectancy, instrumentality, and valence) mediates expectancy effects. Our data did not show motivational variables significantly mediating performance outcomes, which aligns with recent research suggesting more complex or indirect motivational pathways (Wu et al., 2020; Howard et al., 2021). This raises important considerations regarding either limitations in our motivational measurement approach or alternative psychological pathways influencing performance independently of explicit motivational shifts.

our results did not support Brockner's (1988) behavioral plasticity hypothesis, which proposes that trait self-efficacy moderates' expectancy effects on performance (Hypothesis 3). This suggests the hypothesis may have limited applicability in structured, standardized training contexts where initial efficacy disparities are systematically reduced.

Finally, our results suggest that Sutton's (1986) integrated model of expectancy effects requires nuanced adjustment. Although Sutton's synthesis effectively integrates various theoretical perspectives, its predominant emphasis on self-efficacy as the primary mediator does not fully capture the complexity observed in our findings. Recent literature emphasizing contextual moderators, such as organizational identification (Khan et al., 2022) and gender

dynamics (Jehanzeb et al., 2023), reinforces the need to revise Sutton's framework explicitly to include means efficacy as a context-dependent yet potentially central mediating factor.

These theoretical refinements emphasize the importance of contextual specificity and promote the development of more integrative models that capture the multifaceted nature of expectancy effects. By emphasizing means efficacy alongside traditional self-efficacy, future research can better elucidate the diverse pathways through which expectations shape performance outcomes across organizational contexts.

In sum, these theoretical refinements emphasize the importance of contextual specificity and promote the development of more integrative models that capture the multifaceted nature of expectancy effects. By emphasizing means efficacy alongside traditional self-efficacy, future research can better elucidate the diverse pathways through which expectations shape performance outcomes across organizational contexts.

## 4.4 Theoretical Implications of the Findings

The findings of this study present novel and significant theoretical implications that enrich current understandings of the Pygmalion effect and related psychological constructs within organizational settings. This research not only confirms but also significantly refines existing theoretical frameworks by situating the Pygmalion phenomenon specifically within business training contexts, offering a fresh perspective to the field.

### 4.4.1 Refinement of the Pygmalion Effect Mechanism

This study offers robust evidence challenging conventional models of the Pygmalion effect. Traditional theories (Eden, 1990; Rosenthal & Jacobson, 1968) have primarily posited that leader expectations enhance subordinate self-efficacy, thereby driving performance improvements. However, our findings indicate a more nuanced process, as performance gains

occurred without corresponding significant changes in trait or domain-specific self-efficacy. This aligns with recent research by Martínez-Sanchis et al. (2020), who suggested alternative pathways for expectancy effects in family-owned businesses, and Canning et al. (2020), who emphasized the role of organizational mindset and culture in shaping expectation-related outcomes. Consequently, these findings necessitate reconsidering the assumption that self-efficacy universally mediates the Pygmalion effect across different organizational contexts.

### 4.4.2 Elevation of Means Efficacy as a Central Construct

A critical theoretical contribution from this research is identifying means efficacy as a principal mechanism through which the Pygmalion effect manifests in training contexts. Originally introduced as complementary to self-efficacy by Eden (1996), efficacy has received limited empirical exploration concerning expectancy effects. Recent scholarship by Davazdahemami et al. (2018) examined training system perceptions without fully integrating expectancy theory. Our findings elevate means efficacy from a peripheral to a central construct, clarifying its crucial role in bridging leader expectations with performance outcomes. This is consistent with Zhang and Welch's (2021) work emphasizing the relevance of means efficacy in knowledge-intensive organizational contexts.

### 4.4.3 Contextual Boundary Conditions for Expectancy Effects

Our successful demonstration of the Pygmalion effect within a business training scenario underscores the significance of contextual variables in self-fulfilling prophecy research. Supporting recent insights from Khan et al. (2022), who demonstrated the moderating role of organizational identification, and Jehanzeb et al. (2023), who identified gender-based contextual dynamics, our findings reinforce that expectancy effect models must explicitly incorporate contextual boundary conditions. This approach enables a more precise prediction of relevant mediating variables across diverse organizational settings.

### 4.4.4 Integration of Training Effectiveness and Expectancy Theory

The strong relationship between heightened instructor expectations and trainee means efficacy implies a valuable theoretical integration of expectancy theory (Vroom, 1964) with training effectiveness literature. Recent evidence from Shahnazi et al. (2021), highlighting training quality perceptions as influential to self-efficacy, and Rachmayuningtyas (2022), demonstrating the motivational impact of structured feedback, suggest that integrating expectancy-based motivational principles with instructional design frameworks can significantly enhance training outcomes. Our findings provide a theoretical bridge linking psychological expectancy mechanisms with practical instructional interventions, enlightening our academic peers about the potential real-world applications of our research.

### 4.4.5 Reconceptualization of Means Efficacy

The present study expands the theoretical scope of means efficacy beyond tangible tools to encompass training programs and knowledge-transfer processes. While Eden's (1996) original definition was restricted to physical and technological resources, our findings demonstrate that instructional methodologies significantly influence trainees' means efficacy perceptions. This expansion aligns with research by Reichardt et al. (2020), who identified resource adequacy perceptions as mediators in healthcare performance, and Li (2023), who advocates for a broader application of means efficacy within digital and virtual organizational settings. Thus, our findings significantly broaden the theoretical applicability of means efficacy across diverse organizational learning contexts.

### 4.4.6 Challenge to Motivational Mediation Models

Our research's absence of significant findings regarding motivational change as a mediator challenges established theoretical models positioning motivation as an essential

intermediary variable in expectancy effects. This aligns with recent insights from Wu et al. (2020), who emphasized engagement rather than broad motivational changes as more immediate mediators, and Howard et al. (2021), who underscored the complexity and multiple simultaneous motivational pathways underlying performance improvements. Consequently, our findings suggest a compelling need for reevaluating the necessity of traditional motivational variables in mediating expectancy-driven performance changes, advocating instead for more nuanced conceptualizations of motivational dynamics. This challenge should motivate our academic peers to further explore and refine these models.

Collectively, these theoretical insights advocate for adopting multi-pathway models capable of accommodating diverse mediating mechanisms according to organizational contexts, role-specific demands, and task characteristics. The prominence of means efficacy highlighted in this research suggests promising theoretical advancements at the intersection of leadership expectations, instructional effectiveness, and performance outcomes.

## 4.5 Synthesis

The findings of this study reveal an intriguing interplay between the various constructs that collectively illuminate the Pygmalion effect in business training contexts. While the instructors' heightened expectations successfully improved trainees' performance and their perception of means efficacy, they did not significantly alter trait self-efficacy, domain self-efficacy, or motivation. This pattern suggests a more nuanced mechanism than previously theorized (Eden, 1990; Rosenthal & Jacobson, 1968).

Rather than following a simple causal chain where instructor expectations enhance self-efficacy, which then improves performance (Davidson & Eden, 2000; Eden & Shani, 1982), the

Pygmalion effect in business training appears to operate primarily through the enhancement of means efficacy—the trainees' belief in the effectiveness of the training itself as a tool for their future success (Eden, 1996; Sulimani, 1998). This represents a significant theoretical contribution, as it indicates that in training contexts, the Pygmalion effect may be less about changing how trainees view themselves (self-efficacy) and more about changing how they view the resources provided.

The significant positive correlations between means efficacy and performance in the experimental group, juxtaposed with the absence of this relationship in the control group, further support this interpretation. While motivation did not emerge as a significant mediator, the ceiling effect observed in baseline motivation levels (6.51 on a 7-point scale) may have obscured potential changes, aligning with Oz, Eden, and Shani's (1982) findings regarding satisfaction outcomes.

Together, these findings suggest that the Pygmalion effect in business training operates through a distinct pathway, where heightened instructor expectations enhance the perceived value and effectiveness of the training experience, which translates into improved performance (Eden, 2010; Zhang & Welch, 2021). This insight reconfigures our understanding of the Pygmalion mechanism, emphasizing the importance of the training context and resources in mediating the relationship between expectations and outcomes, extending Eden's (1996) conceptualization of means efficacy beyond physical tools to training programs. These implications are enlightening and inform our future research and practice in the field of business training.

# Ch. 5. Summary

## 5.1 Research Summary

The Pygmalion effect in management represents a powerful psychological phenomenon with significant implications for workplace performance. The extensive research reviewed in this dissertation consistently demonstrates that higher manager expectations can lead to improved employee performance across diverse organizational contexts.

The Pygmalion effect, in this dissertation, was revealed and realized despite not confirming the mediation and moderation hypotheses. This time, the expansion of the ability of the generalization of the Pygmalion hypothesis was revealed in the business-organizational sector, which has barely been researched until now. Murphy et al. (1999) recommend that forthcoming research should focus on the impact of Pygmalion on workplace learning and training. By understanding how expectations affect learning processes, more appropriate action programs and practices could be developed. And that is exactly what we have done in this study. First and foremost, it is necessary to promote the awareness of the managers and the instructors, primarily in situations of instruction through intra-organizational instructors who carry out the training continuously, of the effect and its positive implications for the individual and the organization. As a complementary step, it is possible to teach the instructors how to consciously create the effect so that the Pygmalion behaviors will become an inseparable part of their instructional style, with the expectation to improve their trainees' achievements.

## 5.2 Scientific and Applied Contribution

After too many experiments to count in the field of education and far fewer in the field of management, this is the first experiment that addresses the effectiveness of the training and instruction processes in the business organization, while examining the effect of the increase of

the instructor's/trainer's expectations from the trainees on their performances. This is also the first experiment that examines the Pygmalion effect in a situation of the training of significant business skills such as sales and customer service: the effect of the increase of the expectations and the individual's perception of himself and the tools at his disposal for providing service and the learning ability of the role that requires continuous contact with clients. Many models of the promotion of the service have developed in the business world, and few confirmed their effectiveness in a scientific manner. This experiment can provide a relatively easy tool for frequent use without significant costs for all businesses in the instruction of customer service and the promotion of the service ability of the representative in a considerable manner. Despite the limited confirmation of the research hypotheses, it is possible that organizations that train instructors can teach a chapter that engages in the Pygmalion instruction style in order to boost the trainees' performances. Thus, it is possible to teach instructors how to consciously and intentionally create the Pygmalion effect, so that Pygmalion behaviors will become an inseparable part of every training process of new workers as a part of the effort to bring about the improvement of the trainees' performances in the course and consequently in their future functioning.

However, an interesting finding in this research study revealed the difference in the sense of means efficacy between the trainees. The issue of the improvement of the performances and the outputs in the business sector is critical and greatly concerning for managers. Beyond the need for training instructors and managers for the Pygmalion style, it is possible to see that it is not enough for the manager-worker relations to influence the self-efficacy; rather it is necessary to influence the belief in the manner of training as reflecting the real work life. Companies that will create training courses that simulate to the greatest extent the role itself and will further the trainees' belief in the training they took as providing a solution to most of the difficulties encountered in the role will obtain workers with confidence and belief in their ability to carry out their tasks in a quality manner.

From a scientific perspective, the proposed research study may broaden the external validity regarding relationships between the variables examined in other organizations, including business organizations.

Another contribution of the experiment lies in the high coefficients of reliability of the new experiment tools, some of which, domain self-efficacy and means efficacy, were developed in this research study, and this was the first time that means efficacy was not attributed to a physical instrument or physical system that helps in the performance of the role but to a training course, as contributing to the success in the role, rather a "**designated efficacy**". Every use of these indices in additional research studies will summarize them into the main items, while taking into consideration that the measurement of the first two variables obligated in the definition the construction of a designated index, commensurate with the situations of performance / behavior or the tool regarding which the subjects are asked to evaluate their self-efficacy or their work instrument abilities (Bandura, 1977, 1982, 1986; Eden, 1996). The development of these indices gives the researchers in the field of organizational behavior additional and useful tools for the assessment of the organizational system both for the purposes of research and for the purposes of organizational intervention.

For practitioners, this research suggests that conscious attention to expectations may yield substantial performance benefits in the field of organizational training and leaning. Managers would be wise to examine their assumptions about employee potential and consider how their higher expectations might be influencing better team performance.

## 5.3 Recommendations for Future Research

It is possible that the way to achieve future stronger and more comprehensive confirmation of the research hypotheses will be to carry out this experiment in a format similar to that of Sulimani (1998) – a workshop that trains for a Pygmalion instruction style with cooperation of the instructors in the experiment and the exposure of variables such as general self-efficacy, domain efficacy, and means efficacy in a direct manner that will significantly influence the style of instruction and the leadership towards the group and will increase the existence of these variables among the trainees. Moreover, this research study examined the implications of the effect only in a situation of instruction / training. It will be no less interesting to examine the existence and influences of the effect in the real work like in business organizations, where the direct managers have a daily significant impact on the worker's feelings, motivation, and performances. To broaden the external validity of the research study, it is recommended to carry out future research studies in subpopulations with different characteristics, such as managers versus the lower level (is the initial perception according to which managers are more committed to the organization and the role will be expressed in research in the greater influence of the expectancy effect), business organizations from the private sector, women trainees versus men trainees, and so on.

Future research needs to address the decay of the effect over time through longitudinal studies and develop metrics to calibrate expectations that align productivity gains with employee well-being. As intangible communication technologies mature, organizations will be able to leverage expectation dynamics on an unprecedented scale — provided they establish strict ethical guardrails against neuromorphic manipulation.

In addition, to broaden our understanding of the sources of efficacy and in this way also to reveal additional sources of motivation for behavior and work performance, it is recommended

to examine additional variables that constitute sources of efficacy such as the workers' belief in the organizations and its ways, belief in managers, belief in instructors as content experts, and their impact on the performance.

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# Appendices

## Appendix Number 1: Instructions

Adam Mickiewicz University

The Faculty of Social Science

The Program of Organizational Behavior

Dear workers,

The research staff from the Faculty of Social Science at Adam Mickiewicz University, in coordination with the Department of Instruction and the School of Marketing and Network Professions in the Electric Company, is currently carrying out a research study on the topic of providing service in the business world.

Before you are a number of questionnaires that address your perceptions regarding different topics related to the course in which you are taking part and the position you will hold in the company.

Please read carefully and note the most suitable answer in your opinion. If none of the answers is exactly suitable, then choose the most suitable one in your opinion. In any case, please note only one answer for every question. To note the answer, it is necessary to circle the number that indicates the correct answer.

The questions are on a general level. All the data will be calculated on the average, and we are not interested in personal assessment on the part of the course trainees or instructors.

Please answer all questions in their order of appearance seriously and with consideration. Your time is not limited. The questions are phrased in the masculine form but are intended equally for both sexes.

There is no need to write your name. The confidentiality of your answers is assured. Nobody from the research staff will see your answers and know how you responded.

Good luck and thank you for your cooperation.

The research staff

## Appendix Number 2: Demographic and Background Information

1. Age: _____
2. Gender:

10. □ Male □ Female □ Non-binary □ Prefer not to say □
11. Other: _____

3. Highest level of education completed:

12. □ High school □ Some college □ Bachelor's degree □ Master's degree □ Doctoral degree □
13. Other: _____

4. Current employment status:

14. □ Full-time □ Part-time □ Self-employed □ Unemployed □ Student □
15. Other: _____

5. Years of work experience (total): _____
6. Primary language:

16. □ Hebrew □ Arabic □ Other: _____

## Appendix number 3: General Self-Efficacy Index

Different people believe in different things about their abilities. A number of sentences that address beliefs regarding different abilities are presented below. Please note the extent to which every sentence describes what you believe about your ability.

| | | Very slightly | Slightly | Moderately | Greatly | Very greatly |
|---|---|---|---|---|---|---|
| 1 | I can attain most of the goals I set for myself. | 1 | 2 | 3 | 4 | 5 |
| 2 | When I face difficult tasks, I am certain I can accomplish them. | 1 | 2 | 3 | 4 | 5 |
| 3 | In general, I think that I can attain what is important to me. | 1 | 2 | 3 | 4 | 5 |
| 4 | I can succeed in every task when I am determined. | 1 | 2 | 3 | 4 | 5 |
| 5 | I can face many challenges successfully. | 1 | 2 | 3 | 4 | 5 |
| 6 | I am certain that I can perform well most of the tasks. | 1 | 2 | 3 | 4 | 5 |
| 7 | In comparison to other people, I can perform most of the tasks well. | 1 | 2 | 3 | 4 | 5 |
| 8 | Even when the situation is difficult, I can perform rather well. | 1 | 2 | 3 | 4 | 5 |

## Appendix Number 4: Means Efficacy Index – at the end of the course

The Course as a Tool for Carrying out the Position

The questionnaire before you address your perceptions regarding the course you are currently learning. Please circle the number representing the extent to which you agree with each one of the statements appearing below, according to the following scale.

| | | AGREE VERY SLIGHTLY | AGREE SLIGHTLY | AGREE RATHER SLIGHTLY | AGREE MODERATELY | AGREE RATHER GREATLY | AGREE GREATLY | AGREE VERY GREATLY |
|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | THE SOFTWARE I LEARNED IS AMONG THE BEST FOR PROVIDING QUALITY CUSTOMER SERVICE | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 | THE COURSE AND ITS QUALITY ARE CRUCIAL TO MY ABILITY TO PERFORM MY JOB WELL | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3 | THE COURSE I LEARNED HAS SIGNIFICANT WEIGHT IN THE ABILITY TO PROVIDE QUALITY SERVICE | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4 | THE SOFTWARE LEARNED IN THE COURSE CAN INCREASE | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | CUSTOMER SATISFACTION | | | | | | | |
| 5 | IN REAL-TIME, THE SYSTEM WILL OPERATE WITHOUT MALFUNCTIONS | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6 | THE SYSTEM I WORK WITH GIVES ME AN ADVANTAGE OVER PARALLEL SERVICE CENTERS | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7 | MY COURSE GAVE ME TOOLS TO FULFILL MY PURPOSE AS A SERVICE PROVIDER | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | WITH THE SOFTWARE I WILL WORK WITH, THERE'S A SMALL CHANCE I WILL MISS SOMETHING | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9 | THE COURSE TAUGHT ME WELL HOW TO OVERCOME OBSTECLES AND CONTINUE WITH THE TASK | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10 | THE COURSE GAVE ME THE ABILITY TO PERFORM MY ROLE IN THE MOST PRECISE MANNER | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 11 | THE UNIQUE SYSTEM I LEARNED WILL WORK IN REAL CONDITIONS OVER TIME | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12 | I CAN RELY ON THE SYSTEM TO ALLOW ME TO PERFORM VARIOUS REQUIRED CUSTOMER INTERACTIONS | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13 | THE COURSE GAVE ME THE ABILITY TO DEAL WITH SERVICE SITUATIONS THAT TURN OUT HARDER THAN EXPECTED | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14 | THE COURSE UPGRADED MY REAL-TIME SERVICE PROVISION SKILLS | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | | | | | | | | |

## Appendix Number 5: Means Efficacy Index – begining of the Course

The Course as a Tool for Carrying out the Position – End of the Course

The questionnaire before you address your perceptions about the course you took. Please circle the number representing the extent to which you agree with each one of the statements appearing below according to the following scale:

| | | AGREE VERY SLIGHTLY | AGREE SLIGHTLY | AGREE RATHER SLIGHTLY | AGREE MODERATELY | AGREE RATHER GREATLY | AGREE GREATLY | AGREE VERY GREATLY |
|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | The software I learn is among the best for providing quality customer service | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 | The course and its quality are crucial to my ability to perform my job well | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3 | The course I learn has significant weight in the ability to provide quality service | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4 | The software which learns in the course can increase customer satisfaction | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5 | In real-time, the system will operate without malfunctions | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 6 | The system I work with gives me an advantage over parallel service centers | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7 | My course gives me tools to fulfill my purpose as a service provider | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | With the software I will work with, there's a small chance I will miss something | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9 | The course is teaching me well how to overcome obstacles and continue with the task | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10 | The course gives me the ability to perform my role in the most precise manner | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11 | The unique system I learned will work in real conditions over time | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12 | I can rely on the system to allow me to perform various required customer interactions | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 13 | The course gives me the ability to deal with service situations that turn out harder than expected | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14 | The course upgraded my real-time service provision skills | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | | | | | | | | |

## Appendix Number 6: Domain Efficacy Index

Different people have different levels of reciprocal relationships with clients and the ability to provide quality service. Now, think about yourself and your ability to carry out the work of a call operator in the 103 service center. For each one of the following statements, note the extent to which you can carry out the task successfully.

I believe that I can:

| | | AGREE VERY SLIGHTLY | AGREE SLIGHTLY | AGREE RATHER SLIGHTLY | AGREE MODERATELY | AGREE RATHER GREATLY | AGREE GREATLY | AGREE VERY GREATLY |
|---|---|---|---|---|---|---|---|---|
| 1 | Function well in the company of customers | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 | Serve as a role model for work colleagues | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3 | Show high levels of understanding and containment towards customers | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4 | Deal with aggression directed at me | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5 | Manage even when my pool of ideas is depleting | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6 | Deal with ambiguous situations | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7 | Set clear boundaries in contact with customers | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | Handle frequent mood changes of customers | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9 | Deal with pressure | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | Handle "lost" situations | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11 | Deal with emotional manipulation | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12 | Handle people who lose control - angry customers | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13 | Persist in relationships with people who annoy me | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14 | Handle service situations that turn out to be harder than I thought | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15 | Say 'no' without feeling guilty | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

## Appendix Number 7: Service Position Motivation Index

In the questionnaire before you please circle the number representing the extent to which you agree with each one of the statements appearing below according to the following scale:

| | | *Agree very slightly* | *Agree slightly* | *Agree rather slightly* | *Agree moderately* | *Agree rather greatly* | *Agree greatly* | *Agree very greatly* |
|---|---|---|---|---|---|---|---|---|
| 1 | To what extent do you want to perform the role of a service representative in the company? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 | To what extent do you want to perform more than one role in the company? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3 | To what extent are you willing to make an effort to advance? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4 | How important is it for you to succeed in the company? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5 | To what extent do you want to contribute to the company you work for? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6 | How important is it for you to succeed in your role? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7 | To what extent are you willing to invest effort to succeed at work? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | When required to do something difficult at work, I will try very hard to complete it successfully | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9 | I want to achieve high scores while performing my work | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10 | It's very important for me to succeed in the role | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11 | I am willing to invest effort beyond what is | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | expected to satisfy my customers | | | | | | | |
| 12 | I don't need to be convinced to make an effort in my work | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13 | I will constantly try to improve my performance at work | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14 | I perform what is required of me in the best way I can | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15 | I am willing to invest great effort beyond what is expected to succeed in my role | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16 | If you are going to do something - do it well! | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

## Appendix Number 8: Examination of the Manipulation

Dear Lecturer,

Different people have different levels of potential to achieve excellence at work. For each one of your trainees, please note your evaluation of the trainee's potential to achieve excellence.

| | | *Very low* | | | | | | | | *Very high* |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2 | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 3 | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 4 | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 5 | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 6 | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 7 | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 8 | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 9 | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 11 | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 12 | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 13 | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 14 | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 15 | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 16 | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

## Appendix Number 9: The Manipulation- Letter to the District Lecturer

Adam Mickiewicz University

The Faculty of Social Science

The Program of Organizational Behavior

Course: 103 Service Operators – The Electric Company

Dear lecturer,

Before the opening of the course for new workers in the 103 Service Center we would like to update you and ask for your cooperation on an important topic. Currently a research study of the Electric Company and the Faculty of Social Science of Adam Mickiewicz University is being carried out. In the framework of this research, we are investigating patterns of service in the business world and building a profile of an excellent service provider.

In the research study we will follow after the course trainees, which will be expressed in a number of aspects. During the course, a meeting will be held between us, in order to learn from you about ongoing issues related to the trainees, their characteristics, and their performances in the course. You will also be asked to fill out a questionnaire on the topic. In addition, the trainees will be asked to fill out questionnaires that will measure their perceptions regarding themselves as customer service providers and the course training them for this task.

The research study is carried out on a general level. All the data will be calculated on the average, and we have no interest in personal assessment of the course trainees or instructors. As aforementioned, the topic of the research is the characteristics of the excellent service provider. On the basis of previous research studies a profile of this 'excellent service provider' was built. The profile built by the academic research staff was validated and adopted by the Instruction Department of the Electric Company. This profile has proved itself in research studies in the past in its ability to successfully predict success in providing service at an accuracy of up to 95%. So that we will better know the personal / service-oriented ability of the trainees in this course, we examined during the previous month, in cooperation with the National Instruction Department of the company and the School of Marketing and Networking Professions, a number of details about the trainees, including tests, different exams, and additional biographical information. This examination indicated that most of the course trainees are commensurate with the characteristics of the ideal service person.

Since all the trainees of the course in which you are lecturing were accepted following their high correspondence with the profile of the excellent service provider, you can expect the utmost success and high achievements from all your trainees.

I would like to emphasize that the success of the research study greatly depends on your cooperation. In the end, we have the same goal – shared learning about the characteristics of the excellent service person, in order to increase the level of customer service in the company and better deal in the future with the question of the classification, recruitment, and quality of the workers. I would like to thank you ahead of time for your cooperation.

Sincerely,

Professor Slawomir Banaszak and Assaf Ichilov (researchers)

## Appendix Number 10: Examination of the Manipulation - Letter to the Instructors

Adam Mickiewicz University

The Faculty of Social Science

The Program of Organizational Behavior

Course: 103 Service Operators – The Electric Company

Dear lecturer,

The research team from the Faculty of Social Science at Adam Mickiewicz University, in coordination with the Department of Instruction and the School of Marketing and Network Professions in the Electric Company, is currently carrying out a research study on the topic of providing service in the business world.

The questionnaire before you refers to your perceptions about the ability of the trainees in the course in which you are a lecturer.

Please read carefully and note the most suitable answer in your opinion. If none of the answers is exactly suitable, then choose the most suitable one in your opinion. In any case, please note only one answer for every question. To note the answer, it is necessary to circle the number that indicates the correct answer.

The questions are on a general level. All the data will be calculated on the average, and we are not interested in personal assessment on the part of the course trainees or instructors.

Please answer all questions in their order of appearance seriously and with consideration. Your time is not limited. The questions are phrased in the masculine form but are intended equally for both sexes.

There is no need to write your name. The confidentiality of your answers is assured. Nobody from the research staff will see your answers and know how you responded.

Good luck and thank you for your cooperation.

The research staff