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The Role of Empathy in Dealing with the Complexity and Uncertainty within the Educational Field: Meaningful Learning at the “Museum Adventure” Course

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Additional information is available at the end of the chapter

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Abstract

Empathic practices highlight teachers' emotional, social, and cognitive competence and play an important role in taking beneficial action in the classroom. The current manuscript explains the need and the significance of empathic proficiencies in meeting the present needs of promoting meaningful learning processes and dealing with the uncertainty and complexity of the educational field. The approaches, patterns of activity, and methods of qualitative researchers are proposed as a way to enrich the practices of educators in the context-based reality in which they live and work. The implementation of these ideas is presented through the description of a “Museum Adventure” course in an undergraduate education program for pre-service preschool teachers. The course aims to promote students' social understanding, sensitivity, and involvement.

Keywords: complexity, empathic listening, empathic proficiencies, empathic understanding, empathy, teacher education, uncertainty, meaningful learning

1. Introduction

Teachers' empathic practices emphasize their emotional, social, and cognitive competence and play a vital role in taking constructive action in the classroom. The aim of the current paper is to explain the need for and the significance of the empathic culture in meeting the present needs of promoting meaningful learning processes and dealing with the uncertainty and complexity of the educational field. I first present the characteristics of meaningful learning and then explain why it necessitates students to undergo a profound experience

of change. Following this, I describe how a variety of emotions are involved in this change and the challenges that these experiences reveal. Then, I propose empathetic pedagogies for understanding students' internal state and taking responsible action that benefits students' well-being and fosters their development. Finally, I demonstrate the implementation of these ideas in an art course in an education program for preschool teachers, which aims to promote students' social understanding, sensitivity, and involvement.

2. Meaningful learning

A deep educational experience is a complicated personal phenomenon, involving social, personal, and cultural aspects, and is based on dynamic and unpredictable processes [1]. As educators, one of our central aspirations is to bring meaningful learning experiences to our students that are relevant to their own realities, and which will make a difference in their overall cognition, emotions, and behaviors.

From the cognitive perspective, learning is a process of gaining new understandings of the world or exposure to new points of view, relating to one's existing knowledge. Understanding a new idea or term is "elusive to define," in the words of Anna Sfard [2] and involves internal processes and interpersonal interactions that the learner experiences. According to constructivist learning approaches, knowledge is actively constructed through a process of dialogue with others [3] and based on the learner's previous knowledge and experience [4]. Building subjective knowledge and creating meaningful new understandings involves intellectual activity and the activation of cognitive functioning. At times, this requires low-level thinking skills such as identifying the main idea in a text or organizing knowledge in a coherent fashion. At other times, this requires higher order thinking skills such as drawing conclusions from facts or creatively solving a problem. As such, learning is always a self-regulation process, which can often be a struggle, such as when there are gaps between previous beliefs and conceptions and new ones that may be different or may contradict those already known [5]. This learning takes place in ways that facilitates socio-cultural interactions between learners and their environment, including peers and teachers, in a range of experiential processes [6]. High levels of involvement are crucial for meaningful interactions during learning, since meaningful cognitive activity alters the physiology of the nervous system, raising our awareness and guiding us to act in line with the goals we have set for ourselves [7]. It follows that the process of deep learning, which creates new meaning for the learner, rests on two central aspects: the *change* that is inevitably initiated within the learner's consciousness and the active *involvement* of the learner in the process.

Following meaningful learning, change is expressed by one's construction of a new representation of reality, which sometimes incorporates previous perceptions. For instance, following an introduction to chlorophyll and the process of photosynthesis, the green foliage not only has an esthetic meaning as unique scenery but also gains a physiological meaning as a chemical material with unique properties that transforms the sun's chemical energy, which sustains the whole universe. Involvement in the learning may require more than just cognitive activity and can

include behavioral expression among learners in their actions, habits, and tendencies. For example, environmental values education raises the expectation of adapting environmental behaviors; scientific education in anatomy and physiology of the human body lends itself to a desire for a long, healthy life in terms of nutrition and physical activity; and exposure to the significance of empathy strengthens the hope for more humane and more interpersonal interactions.

These two characteristics, *change* and *involvement*, sharpen the distinction between meaningful learning and other educational experiences that learners experience in the classroom. Meaningful learning, by necessity, involves the creation of authentic explanations in the construction of new perspectives and their practical implementation. It is important to note that in the educational realm, there is room for and value to activities that do not create long-term cognitive and behavior changes among learners. Experiences of this sort can help expand students' human and personal horizons and serve as an important foundation for the accumulation of one's "life experience." At the same time, for the purpose of the remainder of this chapter, it is important to distinguish between these learning experiences and meaningful learning experiences—those that create new insights, which generate a change that alters the learners' consciousness and inner world and that recruits them to active involvement.

3. Learning and emotions

Meaningful learning, by definition, obligates the learner to go through a process of change. Every change, whether conceptual, emotional, or behavioral, invites the learner to leave their comfort zone and embark on an adventure. Nussbaim [8] terms this "leaving the cave," that is, leaving the egocentric perception of the things and experiences with which the learner is acquainted. Thus, for example, Shur and Galili [9] demonstrate a teaching practice called the "Thinking Journey," that is based on teacher-mediated discourse with the students. The aim is to connect what is being learned with the students' world and alter their understanding of the topic and to describe the emotional twists and turns that the students go through in its process [10].

Despite the traditional separation between cognition and emotions in learning, neuroscience studies demonstrate that cognitive and emotional processes are intertwined such that emotions influence our understanding during the learning process [11, 12] and the learning processes influence the emotional state of the learner. Expressions such as "cognitive emotions" [13] and "academic emotions" [14] highlight these close ties. Studies from the field of neuroscience provide evidence for the mutual support that emotions and cognition provide to each other in neurological processes. These studies show that the act of learning becomes a multisensory experience that leads to feelings in the learner's mind, is mapped on the brain as an emotional memory, and helps create a renewed sense of self [7]. Profound interaction stimulates both body and mind, cognition, as well as emotion. This facilitates deeper levels of understanding and consciousness, which are critical for meaningful learning [15]. Deep learning in academic subjects that traditionally are not thought of as emotional—such as math, physics, and engineering—has been empirically related to the creation of emotional

connections between concepts. For example, when mathematicians judge an elegant proof, the same parts of the brain are stimulated as when they experience an esthetic art experience such as amazement in front of a painting [16]. For this reason, fear can impede learners' functioning and interest can create long-term commitment to a particular topic.

Our intelligent and flexible brain can develop a variety of emotions that color and direct our intellectual and social efforts. Curiosity, for example, propels us to investigate and motivates us toward new discoveries. Adoration can lead us to emulate the best qualities of others, while anger regarding an injustice directs us to help those in need. One of the insights of neuropsychology is that emotions direct our intellectual and social lives by way of neurological systems that are responsible for our survival [17]. Some of the emotions are positive and are the types that uplift and inspire such as the enjoyment in validation, the pleasure of an elegant proof, the thrill of something surprising, or the astonishment from a beautiful image. Alongside these growth-inducing emotions, learning that enacts change in the learner's world floods the learner with negative emotions. These can include: fear in a testing situation, confusion from lack of knowledge, frustration from a lack of success, contending with surprising or disappointing results, or the difficulty in the practical implementation of new understandings that were learned. When the gaps are large and learners have to contend with dissonance between what is known and what is new, or between the ideal versus reality, and have to contain this dissonance, they can experience perceptual and emotional confusion. Piaget [18] termed this the equilibration of cognitive structures to emphasize the emotional upheaval that accompanies the lack of agreement between the existing approaches with the new ones that are being learned. This occurs when learners experience dissatisfaction from their existing approaches and the alternative seems logical and appropriate to a variety of situations that they experience. They then feel a need for a conceptual change and adopt the new concepts they are learning. Meaningful learning contains hidden potential to enrich the learner and facilitate growth. At the same time, contending with the cognitive changes and the emotional involvement that meaningful learning necessitates, upsets one's mental balance, invites uncertainty, and demands significant energy resources.

My main contention is that this is the nature and essence of deep learning that creates new meaning which is central in education. Students' optimal development as a whole person, in the various aspects of their existence, requires a learning process with built-in uncertainty. This approach highlights the pivotal role of teachers to accommodate students' upheaval, to be prepared to contend with the uncertainty that follows in its wake, and to mediate the situation in a way that can enable them to grow [19].

It can be said that teachers' ethical commitment to the development and growth of their students obligates them to relate pedagogically to the emotional, cognitive, and behavioral aspects that meaningful learning invites in the complex learning environment of their classes. From this perspective, teacher qualifications relate to the ability to deeply understand the learner's perspective, motivation, and difficulties, with the intention of mediating in the best possible way the uncertainty processes that accompany the change that transpires during meaningful learning. This implies that teacher education programs need to include an additional important ingredient—the topic of uncertainty as a characteristic of educational interactions, and

the cultivation of tools to contend with it in class [20]. This approach can promote positive attitudes toward uncertainty in education among future teachers, who can see it as an integral part of learning processes that are dynamic, experiential, and unexpected, as opposed to a threat to their professional competence. In addition, the experience of preservice teachers in understanding unfamiliar educational situations, and contending with them productively, can promote the realization that despite the complicated and nonlinear process of education, educational practices are also characterized by a certain degree of regularity [21].

4. Complexity and uncertainty in education

As with most dynamic and varied activities that occur in human and cultural contexts and are based on interactions, education is an endeavor that, at its root, is complex [1, 22]. Consequently, it raises a feeling of uncertainty among its participants. Uncertainty is defined as a person's subjective cognitive experience, where the person is aware of a lack of knowledge or understanding in specific situations, a contradiction between thoughts and comprehension and behavior [23] or an inability to predict what will happen in the future. Uncertainty in the field of education is not only the providence of learners, as described previously; pre-service teachers and new teachers, as well as experienced teachers, report feelings of uncertainty that they experience in their classes. They report stresses, challenges, and gaps that contending with the field of education raises for them in their work. The most common stress is between the theoretical and the practical in education—between the humanistic philosophy that is taught during training [24] and the hierarchical and authoritative reality that teachers encounter in schools [25]. On the practical level, implementing empathic approaches in teacher-student interactions is a challenge when facing the reality of classrooms packed with students and educational policies that emphasize student achievements [26].

The scope of activity of an educator varies from one meeting to the next and is characterized by unavoidable uncertainty [27]. The definition of educational professionalism in this kind of environment is the ability to make informed judgments, quick decisions between alternatives, and to learn from one's personal experience [28]. Likewise, suspending judgment and freedom from preconceptions and prejudices alongside empathic competence has a decisive impact on teachers' abilities to understand the educational context in which they work. Ambiguity and uncertainty are built into the educational reality based on the assumption that every educational act involves a human interaction to which the participants bring their own experiences and motives. This is the dynamic nature of the interaction that develops between them. Consequently, the aspiration to advance educational processes and meaningful learning obligates us, the teacher educators, to reconsider teachers' training. One way of accomplishing this is to adopt complexity as an educational discourse dealing with complicated educational phenomena, characterized by a lack of consistency and predictability [29].

The advantage of a discourse of complexity lies in the concept of order in the field of education, not as a necessary ingredient, but as a possible ingredient, together with relating positively to the complexity and to nonlinear characteristics of educational activity [21]. Complex discourse

highlights the centrality of relationships and connects between people in educational interactions, in cognitive aspects, and the effectiveness of each one [1]. This is what makes it appropriate for the characterization of educational phenomena and for educational practices, which teachers need to conceive and implement in order to promote proper education [30]. Since my underlying assumption is that education and effective teaching are founded on productive human interactions and the establishment of good relations between the participants, teacher education programs should relate to the knowledge and relevant skills to contend with the complex challenges and uncertainty in the educational field. Not only is the ingredient of complexity not dealt with openly and thoroughly enough in traditional teacher training programs but also gaps, ambiguity, and uncertainty are almost never presented as an integral part of the teacher's activity. The traditional approach does not invest enough in the internal examination of patterns of activity, beliefs, and value systems of future teachers. Consequently, I suggest adding a pillar to training in both the theoretical approach—familiarity with empathic approaches and practices in education, as well as in the practical approach—experience with varied qualitative methods. The approaches, patterns of activity, and methods of qualitative researchers embody great potential to enrich the practices of educators. Qualitative research utilizes an applicable language that enables the expression of people's subjective experience, and thus actualizes the multifaceted and context-based reality in which they live and work. The experiences of student teachers with practices of this sort can advance their training in the spirit of empathic practices and foster discourse that emphasizes the complexity of the field of education and their future work with students.

5. Empathic proficiency and qualitative methods

Despite various meanings and uses of the term empathy [31], there seems to be a consensus that empathy involves seeing the world from another's perspective [32] as well as identifying and understanding another's state and emotions [33]. That is, empathy is a way of being with another person in order to enter his/her world without prejudice [34]. Empathy is a multi-dimensional concept that encompasses both affective and cognitive elements [31], together with awareness and behavioral dispositions. The affective dimension stresses the emotional response of the individuals when they identify an emotional experience in the other person, while the cognitive dimension focuses on their understanding of the other person's, affective, cognitive, or behavioral internal state [35–37]. Another important element of the empathic act is awareness; in this case, the ability to experience another's reality while maintaining one's own without losing sight of the boundaries between them [38]. Finally, behavioral disposition refers to a set of manners and habits such as active listening, suspending judgment, and, if needed, readiness to take actions compatible with the other person's state. These four dimensions (affective, cognitive, awareness, and behavioral dispositions) point to the complexity of the empathic act in terms of the vast array of skills required, while explaining empathy's potential to empower both the person who expresses it toward another as well as the person receiving it. Reflecting this, Nussbaum [39] refers to empathy as an expansion of the empathic person's humanity. That is, by employing empathic imagination, one can

feel and understand the thoughts and actions of others—not by using one’s own “internal grammar,” but by trying to perceive and experience what the other person experiences in the context of their culture.

Based on these understandings of the great potential of empathy in the field of education, together with my colleague Iris Bakshy, I developed an educational conceptual framework—“Complete Empathic Act” (CEA)—which supports teachers in the development of empathic proficiencies (for further details, see [40]). The CEA begins with ethical intention based on the teacher’s concern for the students, continues with the teacher’s aim to understand the student’s internal state, simultaneously maintains the duality between the two points of view (teacher and student), and concludes with taking a responsible action. The CEA is based on the proficiency of the empathic teacher to be with another person [34] in order to enter his world without prejudice to be sensitive to meanings felt by him and gain an understanding of his state. As such, empathic teachers function as skilled human instruments that carefully and attentively collect verbal and nonverbal information about the student, using the skills of open and careful observation with an intention to understand the student’s state. In this way, they act as qualitative researchers, according to the phenomenological approach.

The information that empathic teachers gather is rich and extensive. It can be divided into two types: verbal information—the content that is passed from the student to the teacher through a verbal interaction, and nonverbal information—the nonverbal ways in which the content is conveyed during this interaction (volume and tone of voice, body language, and facial expression). The teacher receives the information through a discerning eye and an attentive ear, while holding an open and deep observation of herself and the student. Additionally, the teacher engages in active listening and an open conversation with the clear aim of understanding the situation. Eye contact, physical closeness, and awareness of the teacher’s and students’ nonverbal language are also needed at this stage of information gathering. The teacher serves as a researcher in phenomenological study, while employing active listening, sensitive observation, and comprehension. The process of information gathering is interwoven in the explanatory process that attempts to understand the gathered information in a nonjudgmental fashion, with the teacher suspending expectations, knowledge, previous opinions, and at times stereotypes. Phenomenological researchers emphasize that one who tries to understand a phenomenon from the perspective of the person experiencing it needs to “put oneself in parentheses.” As the information, explanation, and evaluation accumulate, the teacher’s understanding of the student’s situation in a particular area of an interaction (as the student experiences and understands it) becomes more integrated. The student’s perspective can be a means of thinking and understanding in any particular area, as can the students’ emotions, motives, needs, opinions, and the like. The more mutual understanding that exists—when the teacher understands the student’s perspective and the student recognizes the teacher’s understanding—the more the system of meaningful relationships and good communication between the two is strengthened. This can increase the chance that student will see the teacher’s action or response toward him as beneficial, reinforcing his self-esteem or constructive criticism, even if it is not consistent with the student’s opinion regarding the desired action of the teacher toward him. This understanding is the basis for

activity that the teacher will take after comprehending the student's internal situation, after "being in his shoes."

Another important message, which is anchored in the use of qualitative methods in teaching, is that professional teachers are not satisfied with the use of existing knowledge, but rather create new and unique knowledge for the context in which they operate. Familiarity with qualitative tools during training can help teachers develop insights, accept decisions, and cultivate educational practices in line with their values, motives, and educational purposes. Fostering empathic skills along with flexible thinking will help teachers contend with complex and uncertain realities and even promote a mindset that is useful for contending with complexity [22].

As previously discussed, the uncertainty that is built into meaningful learning processes necessitates the empathic teacher to engage in balancing acts and foster good relations in the class. Empathic practices can serve as a safety net that promotes a feeling of security and belonging in all who come to the class. Teachers weave and spread this net through the formal and informal meetings that they conduct, and it can support and carry the feelings of uncertainty and upheaval that meaningful learning can elicit in the teacher and the students.

6. Empathic practices

Empathic practices serve an important role not only in the implementation of a beneficial activity with the students that will help them grow and advance their learning practices in the class but also in the establishment of the teacher's feelings of social and emotional competence in handling the uncertainty that accompanies meaningful learning experiences in the class. Empathic understanding allows the teacher to "be in the student's shoes," to understand the cognitive processes that they experience, to identify the mistakes in their thinking, their naïve, or misguided perceptions, or other barriers to applying their learning and translating it to a way of life. An empathic teacher is aware of the students' emotions and understands how these emotions relate to their cognitive conceptions and how these might influence their motivation for learning and behavior. Therefore, it would also be beneficial for the teacher to understand the upheaval and uncertainty in which the students find themselves when engaging in meaningful learning, which involves change.

Based on the ideas that have been presented in this chapter, it is possible to explain the balancing role that empathy plays in advancing meaningful learning in the complex reality in the field of education in which we live and educate our children. It is possible to visualize the expertise of an empathic teacher as the art of holding a stick at both ends simultaneously—one end is unbalanced while the other balances. On the one hand, the teacher exposes the students to educational experiences that promote a paradigm shift with the purpose of advancing meaningful learning, and on the other hand, the teacher helps the students contain the upheaval and uncertainty, mediates the gaps and difficulties, and thereby supports the learning process. In a previous publication, I illustrated how empathic practices can aid in advancing meaningful learning and handling controversial and emotionally charged issues in class [19]. In this chapter, I illustrate activity within a course that operates within the framework of the Center for

Empathy in Education and Society, which I founded at the Seminar Hakibbutzim College. The Center considers good relations between people as the educational and social core and sees in their nurturing a value and a condition for learning and growth. The Center's aims are to promote meaningful relationships based on listening, granting value to the other person's perspective, and building trust, which then forms the basis of living together, both at the school and in public spaces. The activities at the Center aim to develop new empathic practices, pool knowledge, and promote research in the field of empathy.

7. "Museum Adventure"

The purpose of the "Museum Adventure" course is to experience the "museum" as a space that invites learning and discovery and as a place for an adventure for personal and collective creation. The course is a part of the preschool teacher education program (B.Ed.) and led by a lecturer on the faculty of education at the College. The description here is based on written documentation (e.g., syllabus, correspondence, and reflective work), an in-depth interview, and observations of the course.

During the course, students are exposed to cultures, international social-artistic initiatives, and new worlds through the diversity and experience suggested by the term "museum." Participation in the course motivates a social enterprise through collaborative art. At the end of each year, the students erect a "Pop-Up Museum" at the College, in which they display exhibits and conduct interactive workshops and performances. The students thus include those at the college and the broader community in their artistic, social, and educational ideas and manifestations. Earnings from these initiatives are donated toward the production of illustrated children's books for the blind.

The course encourages students to "break down barriers," by engaging in a variety of interpersonal meetings, which are accompanied by learning processes and in-depth research that occur in a variety of time and places: in class, at the college, at public and virtual museums, in galleries, and in individual spaces. During these meetings, students attempt to express their personal ideas and lessons using a variety of artistic tools. The students practice their empathic skills by listening closely to themselves and to the stories of the public. They are partners in the production of insights from these experiences, which serve as a basis for the integration of their educational perceptions and formulation of their ethical ideas as humans and teachers.

In 2016, the "Empathy Museum"¹ was inaugurated and serves as a dynamic space that creates opportunities to "wear someone else's shoes," by encountering that person's story. The museum now serves as the home for the Pop-Up Museum, and the first project that was presented was "Toms' Shoes"². This project was planned and implemented based on the inspiration of a similar initiative that took place in Dubai and Jordan. It begins as a meeting between

¹Located at the Center for Empathy in Education and Society at the College.

²Following our online exposure to the impressive social action by Tom's shoe company (www.Toms.com), we contacted their distributor in Israel, presented our social-artistic cooperation project, and suggested cooperating on a project that invites unique interpersonal meetings at the College. The company identified the connection between their social agenda and that of the College and agreed to our request and donated their canvas shoes.

two mothers, one Palestinian and one Jewish, who experience how much motherhood brings them closer to each other. The students in the course selected 21 participants from a variety of communities within the college for the project—administrative workers, lecturers, students, and maintenance workers. Two students tutored each participant, who designed one shoe in a personal way, relating to three authentic ideas from his/her life: happiness, pain, and a dream. The students' guidance began with in-depth research in relation to these three ideas, followed by further discussion, and concluded with the expression of these ideas in the design of the shoe. The students experienced each phase of the process for themselves in their classroom learning. The project culminated with a festive meeting between all the participants and the pairs of shoes, which were incorporated into a permanent exhibition space at the "Center for Empathy in Education and Society" (see **Figures 1–3**).

The pictures from the creations were sent to the artist who initiated the original project in Dubai and Jordan and the dream to form social and artistic connections in areas near and far came to fruition. The course instructor received an email from the Palestinian artist, under whose inspiration Project Thomas' Shoes was born:

Dear,

It brings me great hope that, at times so brutal for our two people, that you and I can reach out and communicate.... But THIS, here, and my connection to my Israeli friends, no matter how we may or may



Figure 1. To dance life.



Figure 2. If music be the food of love, sing on.



Figure 3. The hope for peace.

not disagree on policy, brings me hope only because it is REAL.... As real as the violence that is so pre-dominant everywhere... Thank you for taking the Soles & Stories initiative on, and with such beauty.... my dream is to bring these initiatives to Israel/Palestine, one day. The fact that you started one initiative inspired by us, already tells me that the universe is collaborating on making this happen one day....

In the words of the course instructor, “the connection that was created brings with it the hope and craving for honest and close cooperation. We will continue to dream, to dare, to realize, and to influence.”

8. Uncertainty, meaningful learning, and empathy during the course

The “Museum Adventure” course is revised each year. According to the lecturer, it is designed “in line with the desire, curiosity, and ideas that are stimulated by unexpected meetings between the students and social art phenomena.” Uncertainty is built into the processes of

the course. The instructor notes, “The students start down the long road in unfamiliar spaces. This is the same journey that I went through myself. While I am there for them, I insist on suspending the uncertainty until they find the road themselves. They know that they power it anew.” As to how the students experience the uncertainty, the lecturer notes, “The students explain uncertainty incorrectly. They wonder why they need it? How is it important and helpful?” It seems that these feelings run counter to their earlier expectations from the process of teacher preparation. The instructor also relates to the sense of discovery that is experienced by the students on their uncertain journey in the course. For example, one of the students wrote, “I never in my life felt like this when I found something, I felt that I was solving a huge riddle. Even the enormous effort and large number of hours until I got to this point.” In relating to this, the instructor mentions, “I recognize the joy of discovery, how could I take that from the students?” One important purpose that she considers for herself is, “teaching them not to be afraid of uncertainty, to learn to deal with it.”

At the same time, the lecturer also reveals her own challenges in containing the uncertainty in the class and the feelings that accompany it: “I don’t always have the strength for these journeys and to carry the students’ uncertainty and their need to get answers from me. Some of the students need tremendous support in these kinds of situations. It’s a burden. As teachers, we may unconsciously avoid this.” It seems that contending with uncertainty is complex and may raise controversial attitudes from the lecturer’s perspective as well. Regarding the course’s rationale, the instructor defends *uncertainty* using pedagogical arguments of promoting meaningful learning based on ethical and moral grounds: “If I want to really teach them, the only way to do so is to raise uncertainty ... to allow them to experience an actual process of research and discovery and all that entails, difficulties, problems. If I reveal what I know, the answers, I’m not really teaching them—this is cheating. They won’t learn this way. Honesty and ethics in teaching go hand in hand with uncertainty.” An additional benefit to the uncertainty in the instructor’s eyes is that, “with uncertainty, there is also freedom to move with the art, freedom that is related to learning and creation. I want the students to recognize this feeling of freedom. It comes from within, you are on a journey, and when this happens, everyone feels great happiness. I’m happy and the students are happy.” These comments by the instructor highlight the inherent connection between the meaningful learning processes that take place during the course and experiencing a variety of emotions: feelings of freedom, happiness, and deep meaning.

The instructor’s position on the topic is very clear. She is convinced that uncertainty is needed for authentic, deep, and meaningful learning, despite the difficulties that go along with it, and she is not giving up this ingredient from her teaching. She demonstrates that she has the necessary self-confidence to operate in the environment of uncertainty that goes hand in hand with trying to contain the students’ experience of uncertainty. Regarding the resources that she draws upon to promote teaching and learning that are involved in uncertainty, she relates to the parallel processes of support and backing from the College: “From my perspective, it is possible since I know that I work in a framework that lets me, that backs me.” According to the instructor, the administration’s policy of supporting the advancement of complex processes in the students’ training and varying learning experiences allows her to enter into the complex and uncertain journey in the classroom. The lecturer even notes that she has reached new heights in her professional development as an instructor: “Once you experience the taste

and strength of teaching in the context of uncertainty, there is no going back. I also want to 'rest' from time to time, and teach from the safe and certain spaces that are based on expertise in the knowledge area and multiple years of teaching experience, yet each time I choose the 'non-automatic' way anew and with love. I think that the choice stems primarily from a feeling that the students trust me and I have to address this honestly." From the instructor's perspective, it is not simply a professional choice but also a way of life: "I want to motivate social processes that will do good. I am teaching my life." These statements demonstrate the emotional perspectives that elicit inspiration and reward alongside the painful that the processes of change and uncertainty invite deep learning that creates meaning. This is also a source of her strength: "The course steals a lot of energy, but I wouldn't give it up."

In relating to the empathic atmosphere that emerges during the course, the instructor notes: "The students' individual work process on the topics relevant to their lives, to their choice, to the meticulous listening process that accompanies the production of insight, over the course of the year creates a sense of security in the class that allows them to develop, and at times even to be exposed to the feeling that their friends and the instructor are there for them."

9. Summary

The "Museum Adventure" course is one example of how empathic skills and phenomenological approach can be practiced within the framework of teacher training, in a course whose aim was to promote sensitivity and social engagement through an artistic journey. The teaching process and learning in the course, as presented from the lecturer's perspective, reveal the instructor's ambivalence to the experience of ambiguity and uncertainty in the course. Despite the many challenges and resources required to execute such a course, the instructor helps spread a coherent educational values worldview, which she is able to practically implement in her teaching. Her belief in her ideas, the strengths that she draws upon from her feelings of competence, and the support of the institution's administration for her path are the sources of her ability to persevere with these kinds of practices. The empathic competencies that are practiced in this course, beyond the contribution to processes of deep and meaningful learning for the students training to be teachers, serve as a model for their future role as teachers.

In conclusion, my main recommendation for teacher education programs is to assert the idea of complexity and uncertainty as inevitable components of the educational endeavor and stress the importance of these emotions to meaningful learning and educational interactions. Recognizing the importance of the variety of emotions expressed when relating to the learning process is crucial to teachers' ability to mediate properly what is being learned. This has a decisive impact on the cognitive functioning of the students [41] and their ability to achieve deep meanings [10]. It is thus very important to equip both current and future teachers with tools and proficiencies to contend with these challenges in their classes. Involving future teachers in qualitative educational research can not only lay the foundations for shaping their professional identities as reflective practitioners but also cultivate their empathic practices and pedagogies. This can better prepare them to cope with the complexity and the uncertainty of the educational field in their future work with students.

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References

- [1] Morrison K. Educational philosophy and the challenge of complexity theory. *Educational Philosophy and Theory*. 2008;**40**(1):19-34
- [2] Sfard A. *Thinking as Communicating*. New York: Cambridge University Press; 2010
- [3] Libman Z. Learner Performance in Statistics: A Comparison of Three Instructional Constructivist-Based Approaches. In: AERA Meeting; 3-7 April; Philadelphia; 2014.
- [4] Ausubel DP. *Educational Psychology: A Cognitive View*. New York: Holt, Rinehart & Winston; 1968.
- [5] Levy-Feldman I, Libman Z. Student assessment and good teaching: The gap between ideology and practice. In: Aloni N, Weintrob L, editors. *Beyond Bystanders: Educational Leadership for a Humane Culture in a Globalizing Reality*. Rotterdam: Sense Publishers; 2017.
- [6] Vygotsky LS. *Mind in Society: The Development of Higher Psychological Processes*. Cambridge: Harvard University Press; 1980
- [7] Immordino-Yang MH, Sylvan L. Admiration for virtue: Neuroscientific perspectives on a motivating emotion. *Educational Psychology*. 2010;**35**(2):110-115
- [8] Nusseboum Y. Earth as a cosmic body. In: Nusseboum Y, Echiely T, editors. *Misconceptions and Conceptual Change in Science [In Hebrew]*. Tel Aviv: Mofet Institute; 1999
- [9] Schur Y, Galili I. Thinking journey: A new mode of teaching science. *International Journal of Science and Mathematics*. 2009;**7**(3):627-646
- [10] Shur Y, Nevo E. Processes uncertainty in meaningful learning. *Dapim*. 2017; (in press)
- [11] Pekrun R, Linnenbrink-Garcia L. Academic emotions and students' engagement. In: Christenson SL, Reschly AL, Wylie C, editors. *The Handbook of Research on Student Engagement*. New York: Springer; 2012. p. 259-282

- [12] Picard RW, Papert S, Bender W, Blumberg B, Breazeal C, Cavallo D, Machover T, Resnick M, Roy D, Strohecker C. Affective learning: A manifesto. *BT Technical Journal*. 2004;**22**(4):253-269
- [13] Scheffler I. *In Praise of the Cognitive Emotions (Routledge Revivals): And Other Essays in the Philosophy of Education*. New York: Routledge; 2010
- [14] Pekrun R, Goetz T, Titz W, Perry R. Academic emotions in students' self-regulated learning and achievement: A program of qualitative and quantitative research. *Educational Psychologist*. 2002;**37**(2):91-105
- [15] Damasio A. *The Feeling of What Happens: Body, Emotion and the Making of Consciousness*. London: Vintage; 1999
- [16] Immordino-Yang MH. *Emotions, Learning, and the Brain: Exploring the Educational Implications of Affective Neuroscience*. New York: W. W. Norton; 2016
- [17] Damasio A, Carvalho GB. The nature of feelings: Evolutionary and neurobiological origins. *Nature Reviews Neuroscience*. 2013;**14**(2):143-152
- [18] Piaget J. *The Equilibration of Cognitive Structures: The Central Problem of Intellectual Development*. Chicago: University of Chicago Press; 1985
- [19] Weinberger Y. Empathy in a Virtuous Pedagogy. In: Aloni N, Weintrob L, editors. *Beyond Bystanders: Educational Leadership for a Humane Culture in a Globalizing Reality*. Rotterdam: Sense Publishers; 2017
- [20] Weinberger Y. Introduction. In: Weinberger Y, editor. *Education in an Era of Uncertainty [In Hebrew]*. Tel Aviv: Resling; 2016
- [21] Osberg D, Biesta G. The End/s of Education: Complexity and the Conundrum of the Inclusive Educational Curriculum. *International Journal of Inclusive Education*. 2010;**14**(6):593-607
- [22] Kuhn L. Complexity and educational research: A critical reflection. *Educational Philosophy and Theory*. 2008;**40**(1):177-189
- [23] Han PK, Klein WM, Arora NK. Varieties of uncertainty in health care: A conceptual taxonomy. *Medical Decision Making*. 2011;**31**(5):828-838
- [24] Aloni N. Empowering dialogues in humanistic education. *Educational Philosophy and Theory*. 2013;**45**(10):1067-1081
- [25] Higgins KM, Moule J. 'No More Mr. Nice Guy': Preservice teachers' conflict with classroom management in a predominantly African-American urban elementary school. *Multicultural Perspectives*. 2009;**11**(3):132-138
- [26] Warren, M. Communities and schools: A new view of urban education reform. *Harvard Educational Review*. 2005;**75**(2):133-173
- [27] Shulman LS. Pedagogies of uncertainty. *Liberal Education*. 2005;**91**(2):18-25

- [28] Schon DA. *Educating the Reflective Practitioner: Toward a New Design for Teaching and Learning in the Professions*. San Francisco: Jossey-Bass; 1987
- [29] Davis B. Complexity and education: Vital simultaneities. *Educational Philosophy and Theory*. 2008;**40**(1):50-65
- [30] Cilliers P. Difference, identity and complexity. In: Cilliers P, editor. *Complexity, Difference and Identity*. Netherlands: Springer; 2010. p. 3-18
- [31] Devoldre I, Davis MH, Verhofstadt LL, Buysse A. Empathy and social support provision in couples: Social support and the need to study the underlying processes. *Journal of Psychology*. 2010;**144**:259-284
- [32] Tolmacz R. Concern and empathy: Two concepts or one? *American Journal of Psychoanalysis*. 2008;**68**:257-275. DOI: 10.1057/ajp.2008.22
- [33] Miller F, Wallis J. Social interaction and the role of empathy information and knowledge management: A literature review. *Journal of Education for Library and Information Science*. 2011;**52**:122-132
- [34] Rogers CR. Empathic: An unappreciated way of being. *Counselling Psychologist*. 1975;**5**:2-10
- [35] Erera PI. Empathy training for helping professionals: Model and evaluation. *Social Work Education*. 1997;**33**:245-260
- [36] Hoffman ML. *Empathy and moral development: Implications for caring and justice*. New York: Cambridge University Press; 2000
- [37] Kerem E, Fishman N. The experience of empathy in everyday relationships: Cognitive and affective elements. *Journal of Social and Personal Relationships*. 2001;**18**:709-772
- [38] Katz RL. *Empathy: Its Nature and Uses*. New York: Free Press of Glencoe; 1963
- [39] Nussbaum MC. *Cultivating Humanity: A Classical Defence of Reform in Liberal Education*. Cambridge: Harvard University Press; 1997
- [40] Weinberger Y, Bakshy I. The complete empathic act. *Scholar-Practitioner Quarterly*. 2015;**9**(1):109-122
- [41] Feuerstein R. *Instrumental enrichment: An intervention program for cognitive modifiability*. Baltimore: University Park Press; 1980