

INVESTIGATING THE INFLUENCE OF PROFESSOR AND APPRENTICE INTERACTION ON THE DEVELOPMENT OF APPRENTICE DESIGN VALUES AND ATTITUDES DURING THE ARCHITECTURAL EDUCATION PROCESS

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Abstract

During the process of architectural education, apprentices master the views, attitudes, and perspectives they have acquired during their teaching and research as well as their theoretical and practical skills. In the meantime, the influence of the professor's views on apprentice attitudes seems obvious that can be traced by each teacher's thoughts, speech, and works of the apprentice. Despite much research into the transfer of teacher knowledge and skills to apprentice, studies on the influence of the teacher values and attitudes on the apprentice are scarce. This research seeks to examine the effective characteristics of the teacher and apprentice in the transmission and development of these values and attitudes and to increase the quality of transferring values and attitudes from professor to apprentice, by sticking to the above attributes and ultimately accelerating the design process of designers. In accordance with the qualitative approach of the present study, the grounded theory was chosen for analyzing information and presenting the final theory. Out of 670 interview codes, 120 initial concepts were identified and finally, the roles of professor and apprentice in six core categories were identified and formulated in two domains of individual and social factors. Data were collected using semi-structured interviews, observation, and field notes (during the interviews). Interview questions ranged from inclusive to exclusive and from general to specific aspects, and in half of the cases, the interviews were repeated two to four times to complete the data. This article is part of more comprehensive research findings that examine the process of transferring knowledge, abilities, and insights from professors to apprentices.

Keywords: Professor Characteristics, Apprentice characteristics, Professor-apprentice relationship, Transfer and development of values and attitudes, Design process, Expert process.

INTRODUCTION

It is believed that the scientific, artistic, practical, and ethical qualities of the professor guarantee the formation of a constructive relationship between the professor and the apprentice (Mirzaei & Baghmadi 2016, 8).

Thus, the more proficient and advanced a professor is in his or her professions, the greater his or her influence on his or her apprentice or, in other words, the quality of training students. Therefore, it is important to specify the scientific, practical abilities and

other factors influencing the professor's expertise clearly to show the quality of the transfer of diverse theoretical and practical ideas and skills from professor to apprentice. Obviously, by recognizing a professor's attributes, it may be possible to classify their expertise in a range from influential to ineffective or even destructive. Thus, with complementary planning and research, the scope of the professor's effectiveness can be continually enhanced from one level to another, thereby enhancing the richness of his teaching and ultimately the quality of architectural education and the speed of the architectural apprenticeship process. On the other hand, in this process, the willingness of apprentice to learn - which is ultimately influenced by his or her individual and social characteristics will be influenced. The purpose of the present article is to examine the effective and reciprocal interaction between professor and apprentice in the transfer and development design values and attitudes during the architectural education process. We believe that our findings can help accelerate the process, leading to purposeful development of values in architecture students, and effective training of the professors. In order to explain the importance and scope of the topic, the concept of value and attitude has been defined and the scope of these two keywords in the research has been identified:

Value

In English, the term value means price, value, and currency (Aryanpour Kashani & Assi 2013 112), and in sociology it is something that is generally accepted (Social Values) (Schwartz & Bilsky 1987, 86). That is to say, social values constitute the facts and things that are desirable and desired by the majority of a society (Miller 2018, 32). In other words, values often refer to ideas that humans have about good and bad, desirable and undesirable things (Johnson et al. 2018, 108). Four modes have been introduced for value in Lalande's philosophical culture:

First mode: value as what the individual or group is "interested" in.

Second mode: what is more or less among some "is honored and respected".

Third mode: when the individual or group is "satisfied" in achieving their goal.

Fourth mode: when the "value of goods and practice" (in economic terms) is promoted (Lalande 1915, 202-212).

In the above definition, the first, second, third and fourth modes are interpreted as the degree of value attribution, the intrinsic value, the functional value, and the supervisory exchange value, respectively (Mohseni 1995, 40).

In general, the definitions of value can be summarized in the following four categories:

□ Value is sometimes expressed in the form of a goal and sometimes in the attainment of the purpose and value of an item. Many types of values are recognizable, including economic, moral, political, legal, cultural and religious values (Sazgara 1998, 15-16).

□ Values are systems of symbols that are organized into moral abstract ideas of good and bad, appropriate and inappropriate, right and wrong. These common basic symbols are language, technology, belief, norm, scientific repository, and so on (Turner 1975, 128).

□ Social values refer to the general patterns of behavior, collective judgments, and behavioral norms that have been widely accepted and demanded by society (Babaei 1993, 65-67).

□ If social roles are the source of expected behaviors of individuals and norms are the definitive criteria of people's behavior, values can be regarded as ethical, logical, and norms that are effective in any social group, and with the intensity and weakness of the behavior of the group and its members, that is, what they do or abandon, it forms an inner unity for the group (Turner 1999, 18).

Finally, from another perspective in defining the word value, four points must be considered:

- A. Applying value to economic issues
- B. Intrinsic and non-intrinsic value

C. Assign the value to objects or individuals

D. Any moral value that is the subject of human behavior or the origin or outcome of voluntary action is the subject of the value system (Mesbah Yazdi 1997, 194)

Attitude

There are several definitions of the concept of attitude that are outlined below:

□ Attitude is a state of mental and neurotic readiness that is organized through experience and it has a direct and dynamic impact on one's response to all attitudes and situations dependent on the attitude (Allport 1935, 54).

In this definition, which is mainly based on learning theory, the impact of experiences on organizing attitudes as well as responding to a situation (as discussed in the behaviorism approach) has been addressed. Attitude is a state of mental and neurotic mode and tends to have a direct or dynamic effect on one's responses to all the subjects and situations with which they are organized through experience (Shymansky et al. 1983, 21-28).

□ Attitude is a combination of beliefs and emotions that prepares a person to look at others, objects, and groups in a positive or negative way.

Attitudes summarize the evaluation of objects and thus predict or guide future actions or behaviors. It can be defined in terms of learning theories and cognitive approaches. In each of these theories, the concept of attitude is defined differently and emphasizes each of the different aspects of attitude (Langroudi & Soleimani 2013, 19).

□ The attitude is a sustainable organization of the motivational, emotional, perceptual, and cognitive processes associated with some aspects of the individual's world (Krech & Crutchfield 1948, 113).

It is noted that this definition does not mention the origin of attitude and instead emphasizes the mental experience of the present. In other

words, every attitude is a priori position to perform positive or negative action towards persons, objects, and events with respect to social goals and it plays a leading role in transforming psycho-emotional states into motion modes (Pasha Sharifi 2002, 54).

□ Attitude is a complex state of emotions, desires, beliefs, or prejudices that, due to different experiences of the individual, paves the way for behavior in individual.

This view holds that attitude is a tendency to do the action that creates positive or negative values in a person (Karimi 2009, 24).

□ Attitudes are acquired, persistent, and have motivational and emotional components, signifying the relationship between the individual and the subject of the attitude (Shirkund 2004, 19).

□ Madigan views attitude more important than one's knowledge and skills and believes that attitudes guide one's behavior and influence one's social adjustments and guide one's way of construction or deviation (Fradkin & Madigan 2003, 84).

As mentioned, the concept of attitude as a leader and a guide to the process of acquiring knowledge and skill must be well understood and its importance in the process of apprentice education particularly emphasized.

Attitude features

Otto Kleinberg's attitudinal characteristics are:

□ Subject: Whatever is in the individual's cosmological field is the subject matter of attitude, such as attitude toward objects, individuals, groups, organizations, political events, economic issues, artistic issues, philosophical affairs, God, other worlds and like them. Our attitudes toward other people are probably our most important attitudes.

□ Orientation: Orientation means to agree or disagree with the subject of an attitude.

□ Intensity: It means the degree of agreement or disagreement with the subject matter. The cognitive component of the attitude may either fully agree with the subject and

regard it as absolutely well or be completely opposed to it as absolute evil. The emotional component of the attitude may also appear as unconditional affection or pure hatred (dealing) with the subject, and the attitude readiness component may show complete support or serious opposition to the subject.

□ Type of composition: The components of the three-part attitude system may be superficial, simple, profound, and complex. Children in the perceptual dimension are limited and, therefore, they are credulous, but adult perception is widespread and they are incredulous. Participation in elections for one person may merely end up voting, but in another, it will be accompanied by widespread propaganda for the desired candidate to win (Mehrara 1994, 65).

□ Coordination: Attitudes are sometimes coordinated and sometimes uncoordinated and one may approve applying power to suppress political dissent by the government but disagree with the government's determination in the economic arena. The same person may have coordinated attitudes toward a number of other issues (Mehrara 1994, 66).

Regardless of which definition is more comprehensive, the professor and apprentice behavior - like any other human being, is influenced by accepted values and attitudes deliberately and unwantedly and it is the result of diverse personal and social experiences and perceptions. Given the wide range of these origins, these values and attitudes are influential in all the individual, social, and professional decisions and approaches of the professor and apprentice.

Since each individual is ultimately committed to a set of values and because the value of art is not only of philosophical importance but also of social importance (Graham 2005, 8), as a result, values in the process of art and architecture training are no exception and they are a source of personal and social doctrine and experiences that the professor adheres to when they teach art to apprentice and the apprentice indeed has values that must consider.

According to the aforementioned discussion, the professor cannot step into teaching while his values and attitudes as the current spirit and underlying behavior are not effective in his educational process and approach. The professor inevitably reflects and develops his or her accepted social and professional values - whether in the subject of art education or not - during art education, in the mind of the apprentice. As a result, the values and attitudes of the professor, as well as the apprentice, must be given special attention to make the teaching process more purposeful and productive

Position of Value and Attitude in Art and Architecture

It is clear that the value of the artwork as the output of the artist's values and attitudes is the very substance of a work of art whose value is confirmed by artists. A community in which the members are experts and familiar with explicit and implicit artistic values of that artwork or concept, the scholar considers it worthwhile in a view at the artwork, and has a valuable attitude towards it or, on the contrary, according to his view, this artistic event is worthless. In other words, an artistic attitude is a set of norms that are differentiated right or wrong, to the point or not depending on the values of the commentator experts, and this fact can also be explored in the art education process - like the process of creating artwork.

It is also important to note that values and attitudes in architecture differ from other disciplines. Architecture is inevitably involved with a wide range of sciences due to the variety and extent of concepts, and understanding and teaching architecture require an acceptable acquaintance in a variety of fields. Architecture applies a range of fundamental sciences and humanities to applied sciences and various subjects of art. Even the study method of architecture students is very different from other disciplines (Lawson 1999). Therefore, understanding the values and attitudes in architecture towards other disciplines of art is more difficult.

Statement of the problem

During the training process, the apprentice masters the insights and views gained through art education and research as well as theoretical and practical skills. The influence of accepted values, attitudes, and macro views of the professor on the apprentice cannot be underestimated, and it is important to take a brief look at thoughts, and works of students of every professor. As the great philosopher of history, Plato expresses his writings and works in Socrates' language which is an indication of his professor's influence on him and his views and this shows that he has respected and valued his professor's way of life and ethics, and has tried to keep his thoughts alive in his writings (Ahmadian Rad 2016, 16).

The present study seeks to explain the role of professor and apprentice in transferring values and attitudes from professor to apprentice to improve the quality of neglected but effective factors in the process to raise awareness of effective cases, enhance the quality of this transition and ultimately accelerate the expertise process of designers.

Research Methods

Given the qualitative approach and the various aspects of the present study, the grounded theory was selected for analyzing information and presenting the final theory. The study was conducted through in-person, open and in-depth fourteen interviews with interviewees at three general levels of architecture professors, graduates of architecture and apprentices of state and non-state universities inside and outside the country reaching the theoretical saturation with the snowball sampling method. The research process tries to incorporate different scales, ages, and levels of learning into the research process to include interviews range from novice to expert individuals.

Interviewees were selected through a consultative selection of experts and the interviewees present in the study, and each interview was conducted in the evening, with one to two-hour intervals at the interviewee's

workplace and it was audio-recorded. After each interview, word-by-word extraction of interview was done and all questions and answers were coded without any editing.

In order to document the research method, the Grounded Theory of Strauss-Corbin Edition 1998 (Strauss & Corbin 1998, 9) qualitative analysis was used, and MAXQDA v10 R150410 software was used to analyze the findings. Data were collected using a semi-structured interview method, observation, and field notes. Interview questions were attempted from inclusive to exclusive and from general to specific aspects, and in half of the cases, the interviews were repeated two to four times to complete the data.

The interview questions focused on the principle of how the values and attitudes were transferred from the professor to the apprentice and the factors that influenced the transfer. In an interview with the professors, it was tried to use the experiences of apprentice training, the memories, and findings of their apprentice's period to extract the characteristics that influenced the transition. In interviewing the graduates, the characteristics of the professor's influence on their professional attitudes of the apprentices after graduation were discussed regarding the causes and characteristics that make some apprentices interested in some professors.

Research Results

After conducting twelve comprehensive interviews without including repeated interviews, the research reached theoretical saturation and two other interviews were conducted to reach the certainty. Finally, out of 670 extracted interview codes, 120 basic concepts were identified and finally six major categories including social factors such as "effective social contexts", "effective educational areas", "learning environment", and individual factors such as "characteristics and approaches of the professor", "characteristics and approaches of the apprentice" and "impact of the professor-apprentice relationship" were identified and

formulated (Figure 1). Finally, by integrating and comparing the above categories, the “characteristics and approaches of the

professors” were determined as the main category

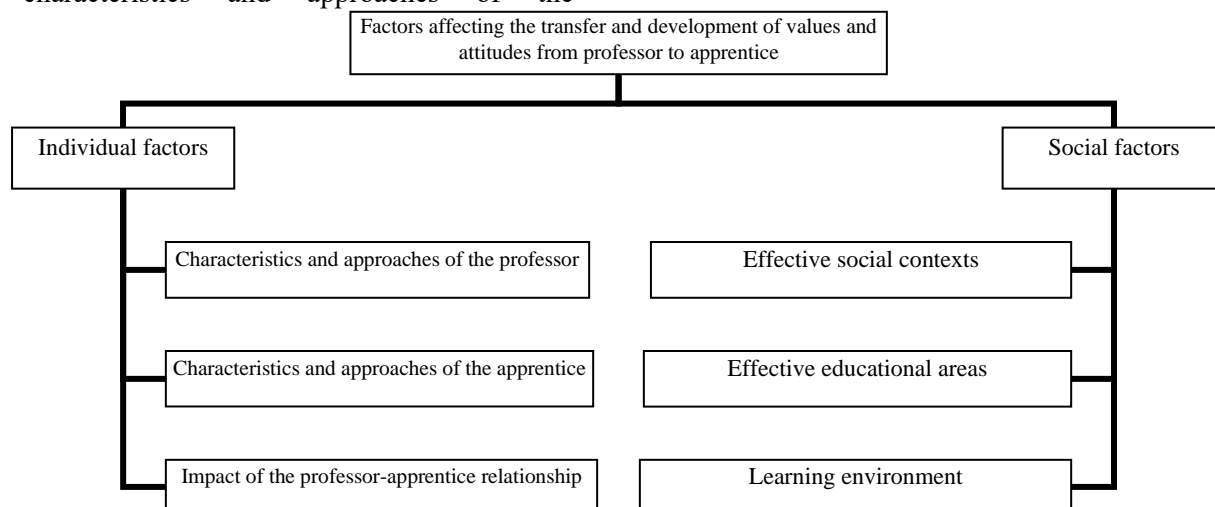


Figure 1. Factors affecting the transfer and development of values and attitudes from teacher to apprentice (Source: Authors)

In this section, it was tried to show which characteristics of professor and student can be effective in the formation of theoretical and moral foundations of student that make the professor accept those foundations and apply

them in his/her process of theory and practice. In short, the most important concepts obtained in the individual factors have been presented in Table 1.

Table 1. The key Concepts for Individual Factors Influencing the Transfer of Values and Attitudes from professor to apprentice (Source: Authors).

Fields	Main categories	General Classification	Codes (basic concepts)	Frequency
Individual factors (3 categories)	Impact of apprentice (17 items)	Positive effective factors (14 items)	Comparing the professor with another professor by apprentice	11
			Reluctance and devotion of apprentice to professor	10
			Imitating and trying to look like a professor	8
			Apprentice’s interest in the subject	8
			Understanding the professor’s words over time	7
			Professor’s evaluation by apprentice	7
			Asking for question from the professor	6
			Compassionate study of apprentice	3
			Tolerance of apprentice	2
			Understanding the practical and scientific distance with the professor	2
			Others	10
				Negative effective factors (3 items)

	effective professor (55 items)	of	Positive background properties (48 items)	The aimlessness of the apprentice	6	
				Profit-seeking apprentice	2	
				Professor's scientific and practical mastery of teaching courses	34	
				Having teaching skills	25	
				Commitment and Compassion	23	
				Kindness and affection	17	
				Individual attraction or social impact (charisma)	15	
				Insist on clarifying the concepts, motivating and self-confidence	13	
				Promoting personal and professional worldview	13	
				Success in streaming	13	
				Reasonable and persuasive training	12	
				Providence	11	
				Others	163	
				Negative background properties (12 items)	Professor's indifference and discouragement	12
			Dishonesty and Hypocrisy		4	
			Intolerance of dissent		4	
			Teaching headlines		3	
			Being bored		3	
			Self-censorship		3	
			Credulity and giving scores		2	
			Considering student as rival		1	
			Low-knowledge level		1	
			Indifference to apprentice's personal problems		1	
			Others	4		
			Impact of the professor-apprentice relationship (8 items)	Non-constructive relationship (2 items)	to disagree on some issues	4
						Unfair deal
				Constructive relationship (7 items)	Interaction and conversation	13
					Companionship and communication	10
Unconscious Transition	7					
To be the same believers	4					
Apprentice's moods	1					
Love and Intimacy (6 items)	Mutual emotional connection	7				
	Creating love in a field beyond the educational field	4				
	Apprentice interest in the personality of the professor	4				
	Transfiguration in the event of affection	3				
	The positive or negative impact of affection	2				
	Freedom of speech in demands	1				

By explaining and clarifying the above context, the following items are extracted and summarized as positive and affective characteristics of the professor and apprentice

in the development of the apprentice's design education process (Tables 2 and 3).
values and attitudes during the architectural

Table 2. Positive and effective characteristics of the professor and apprentice in the development of the apprentice's design values and attitudes during the architectural education process (Source: Authors).

Effective feature (concept)	Frequency	Effective feature (concept)	Frequency	Effective feature (concept)	Frequency
Professor's scientific and practical mastery of teaching courses	34	Having the skills of a professor	25	Commitment and Compassion	23
Kindness and affection and interest in apprentice	17	Charisma-Individual Attraction	15	Insist on clarifying concepts, motivation and confidence	13
Success in streaming	13	Promote personal and professional worldview	13	Basic, reasonable and persuasive training	12
Providence	11	Practical belief in his words	10	Greetings and knowing about personal problems of student	10
observing justice between apprentices	10	Boredom, forgiveness, and patience	9	Insist on apprentice's learning	9
Full, simple and smooth expression of power	9	Humility	8	Honesty	8
Freedom in personal beliefs	8	Respecting apprentice	8	humanity level	7
Being influenced by your professor	6	Being conversational	6	Appearance adornment	6
Professor spirituality	5	Neglect the point of being accused of ignorance	5	Professor's approval by apprentice	5
Apprentice's participation in education	5	Understanding the audience's social context	4	Creating a research space	4
Trust in apprentice	3	Joking and vitality	2	Ability to discover talents	2
Interest in the teaching subject	2	The correct form of expression of the professor's demands from the apprentice	2	Self-confidence stemming from knowledge and experience	2
Tolerance to hear the opposing views	2	Self-reform and perfectionism	2	Prioritize quality over quantity	1
Shyness and comity	1	No financial attachment	1	Love For Professor	1

Table 3. Positive and effective characteristics of apprentice in the development of the apprentice's design values and attitudes during the architectural education process (Source: Authors).

Frequency	Effective feature (concept)	Frequency	Effective feature (concept)	Frequency	Effective feature (concept)
8	Apprentice's interest in the subject of teaching	10	Affection and devotion towards the professor	11	Compare professor with other professors

7	Professor's evaluation by apprentice	7	Having a learning motivation	8	Imitating and trying to look like professor
3	Compassionate education	6	Student's demand from professor	7	Understanding the professor's words over time
1	Trying to compensate professors' efforts	2	Tolerance and forgiveness	2	Understanding the practical and scientific distance with the professor
		1	Order and arrangement	1	Respect for professor

Given the multiplicity and intensity of concepts, the following are some of the examples that may explain the more important points of the research results:

Examples of Positive and Effective Characteristics of Professor

One of the most important factors at the beginning of familiarity between the student and professor that makes the comparison between the professor and others and makes the professor to be assessed, is his knowledge and his mastery over the subject that he teaches.

Seemingly, the apprentice first sees the professor's knowledge, which, along with his personal behavior and characteristics, and perhaps his type of view of the subject, creates a kind of acceptance in the apprentice that makes a more serious scrutiny of the professor. Meanwhile, in skill-based disciplines such as architecture, sometimes a professor's ability to draw details or build a character, or even simply rotate the pen can overwhelm the apprentice and provide grounds for further capacity development.

In addition, professor should be a good person and easy to communicate, he should also have something to say (professor).

and you know, for example, when he was explaining an issue, he talks about it based on the reference as if he knows everything in the architecture book and a hundred-page reference.

If he draws a line, he draws it for a reason, and if he speaks, he speaks for a reason (professor).

The person who can't give you something, has no purpose for himself because he doesn't know anything (professor).

Those who had this knowledge completely, were in the center of attention because of that knowledge (graduated).

His excuse is knowledge exchange, and it seems that students are attracted to knowledge. For example, he says that he is knowledgeable and that they listen to him and that they see other things as well (professor).

In high school, most of the people I met and I wanted to follow, were academically successful (graduated).

Because knowledge is a priority, it is the focus of science. It means you come to learn how to design. (professor).

Moral characteristics are very effective, but knowledge is also very effective ... if one is not knowledgeable then you will not be attracted (professor).

He was a master in his field and its principles (professor).

He may observe and he will see [the professor] more scientifically (professor).

In his field of work, he was modest, patient, and knowledgeable. (Graduated)

Teaching skills

In the research process, what is obtained through interviews indicates a variety of tools and includes the methods ranging from hand movements to intimidating and awe-inspiring behaviors. Another point is that these practices vary from professor to professor, and even a

professor's approach changes across different courses and teaching levels:

Although I would not give a score easily, I used to say that I would give two points for good handwriting (professor).

The one who can make these qualities in others to accompany him, it depends on the person's personality (professor).

She used her hand gestures a lot and walked a lot in class (Graduated).

The first things that make a person listen to you is to be very kind, very funny, very knowledgeable or very polite. Finally, something in him makes you start hearing (professor).

Now we can say that there is a method for establishing a specific relationship. One part of the art of communicating is the art of teaching. The art of teaching is what you know and what to say to an apprentice (professor).

The professor must know the teaching techniques well. That is, he/she must know psychology. Sometimes you go to class and you see an apprentice thinking. The knowledgeable professor asks her what happened? What is the matter? Why are you upset? (professor).

I tell the students that I do not call the roll and I do not give negative points because of that, but whoever comes after me makes me sad, that means do not be late (professor).

Basic, reasonable and persuasive education

Some points in this study suggest that the complete and correct transfer of knowledge and ability - or the same skill - is likely to result in a complete and correct transfer of attitude. Perhaps this basic, reasonable, and persuasive teaching influences the evaluation and subsequent acceptance of the professor by the apprentice and facilitates the transfer process.

Yes, a person explains everything scientifically, but the relationship does not happen, because you do not know what he believes because that person does not talk about his beliefs (professor).

It seems that eventually, the professor helps student to replace him and see through his perspective. That is to say, he sees what he sees and what is shown to him (professor).

One of the apprentices once said to me, "Do you know what your difference with others is?" The difference is that when you say it is a chassis board, you explain why this is called a chassis board (professor).

It is important that how much a professor describes additional matters, history and backgrounds and the causes of the incident and even the causes that why he believes in something (professor).

Then the apprentice might say why? Moreover, the professor says for these reasons. The professor might explain the scientific reasons and his experiences (professor).

Boredom, forgiveness, and patience

The boredom of the professor can give the apprentice enough opportunity to understand, accompany, and provide the ground for his growth. In addition, some of these characteristics can also play a role in his acceptance by the apprentice:

He was very modest and patient. These are the qualities a professor should have (professor).

The professor has to be patient otherwise, he/she is not a professor (professor).

[Interviewer:] Some people are quite capable of making others hate them. [Interviewee:] Yes, but I am the professor, so what is the role of a professor? (professor)

Keep the class in order. If anyone gets messed up, just forgive as far as possible (professor).

Being conversational

Being conversational depends on one's personality on the one hand, and on the other, on the characteristics that the professor understands in his or her job. Effective professor traits include talking and trusting the students as someone with whom he can talk and exchange ideas:

You should not think that the truth is completely clear, and it is all in me and if you believe it, it does not make any sense to count on your opponent (professor).

The truth is obvious which I have within me, and I am the only one who should correct you (professor).

First, the truth is not clear, and it is not like that the truth is clear and it is with me.

The truth is in the middle and it is neither with me nor with you, we are looking for it (professor).

Creating a research environment

Creating a research environment, especially for a novice apprentice, can lead to many questions that can be frustrating for the professor, but would certainly welcome a prospective and committed professor to ask the apprentice questions and try to find the answer. The research environment can facilitate assessment, acceptance, and accompaniment for apprentice and thus facilitate the educational outcome:

The professor should create a research environment for apprentices (professor).

Perhaps the reason for accepting an apprentice from a professor is that if the professor tells the apprentice what he or she sees, he or she will understand the reasons and accept the professor (professor).

I have to say that the professor's words should be proven to the apprentice and open the way for research to prove it (professor).

Providence

Overall policies and the guiding principles - the general rules governing his practice - that will shape his professional life by the professor's quest to understand what the future holds for the apprentice:

“he used to say many times that: what you learn in these four years, you will work with for a lifetime, you make money, you live and as a result, you have to be educated and delivered to the community in these four years” (Graduated).

Examples of Positive and Effective Characteristics of Apprentice

Having learning motivation

The learning motivation is the driving force that makes the apprentice stay in this knowledge transfer and endure the hardships. This motivation can range from personal interest and hard work to professional planning:

I wouldn't go to my hometown at the weekend and the professor was surprised and said you were going, so why didn't you go? (Graduated).

The energy that the professor gave me was so great (Graduated).

In developed countries, those who go to university have an incentive, because the degree is not important and if someone has a job, they do not go to university because it is stupid to waste your time for two years. It can support you, therefore, profession is the matter there. (Professor).

When I learn something well, then comes the demand. It is not like I learn something that I am interested in (Apprentice).

Yes, apprentices are motivated. It does not matter whether it is Tehran or other cities. Maybe in towns, these motives are even more (professor).

Apprentice's demand from professor

The findings of the study indicate that the apprentice has characteristics that enhance his position among the peers and make the professor find him/her more eager to learn and the first opportunity to form a constructive relationship between the professor and the apprentice:

As the apprentice goes through many things, he/she should work hard and take seconds seriously (professor).

Some people are really motivated to learn and work compassionately (professor).

Apprentice should be eager (professor).

Any professor can identify prominent individuals in a glance. I remember that he said

during eighteen years, I only saw two individuals like this apprentice (Graduated) that helped and supported unconditionally.

They would not teach the trick of trade to just every person. (Graduated)

Affection and devotion to the professor

Following the professor's assessment, when the apprentice finds valuable qualities in the professor, he or she will find satisfaction and dedication towards him or her, and the more he finds his findings to be true, the more desire and sincerity will increase. This will ultimately lead to some kind of imitation and obedience and will make the apprentice to be obedient. Matching words with practice and being professionally and scientifically superior can be effective in developing this devotion:

How does one get interested in a professor? ... Maybe he observes and sees him more scientific (professor).

The basic principle of the apprentice looks suddenly changes. Somehow, the votes are in conflict and the apprentice is in the middle (professor).

Sometimes, he looks around and hears something that he feels is more correct, so it seems that this attracts him (professor).

Comparison of professor with other professors

One of the basics of professor evaluation by an apprentice is comparing him with another

professor. It should be noted that this comparison covers a wide range of ethical characteristics to the teaching, accountability, and academic teaching, and knowledge of professor and perhaps it can be mentioned as the most important pillar of apprentice recognition of the professor:

Other professors say blot but we do not even know what it is. They say learn by yourselves (apprentice).

I had four professors from high school to now that really influenced my learning (apprentice).

There were so many important people there that he was an outstanding professor among them. This is very important (professor).

All these years I've been studying, I can say that there were people that besides transferring knowledge, my job characteristics are like two professors (Graduated).

Nevertheless, if you sat for an hour, he would not protest, sometimes, he would say that he got tired, or, say, my own class's students come forward (professor).

I remember a professor saying that the problem is the function of your work. I asked, Foundation? I was a freshman. I did not know. He said function, and he encouraged me to ask what the function is: function, performance (Professor).

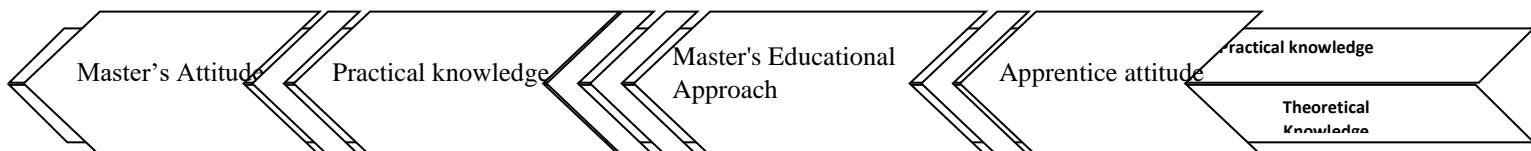


Figure 2. Master's Attitude Formation process

Result and discussion

The findings of the present study indicate that the transfer of attitude and quality of view on the topic is more important than the transfer of knowledge. The professor's educational approach is strongly influenced by his attitude toward the subject. The priorities that the professor considers for transferring his/her content are influenced by his or her major and partial values and attitudes towards design education. Jane Darke refers to this as framing, which in fact refers to the priorities made in the designer's mind when entering the problem situation (Cross 2011, 56).

In addition, since the professor actually simulates the design problem when teaching, the same prioritization takes place in the professor's mind and the professor explains from the perspective of the subject that the apprentice wants to look at the problem from the same perspective and answer it.

Regardless of other factors, the results of this study suggest that the professor has learned a considerable part of this attitude in his apprentice process and another professor, and through experience and research, he has accepted, modified, and rejected parts. As a result, he defends and teaches his own "personal opinion" on the formulation of the lesson and method of teaching.

As a result, the professor's attitude is transferred to the apprentice, and the apprentice underpins his attitude until he becomes an expert professor or attains his personal style. One of the most basic elements of this acceptance seems to be some kind of respect or reverence. Even prominent experts and professors acknowledge that many of the past theoretical and practical teachings of the past professors exist in their minds and occur in design decisions (Figure 2).

Some interviewees argued that since the apprentice is first introduced to the concepts by the professor, she is completely reluctant to receive the attitude during the same training. Professor also teaches "how to do",

unconsciously "how to see" and "what to think" during training. For the first time, the apprentice looks at and senses the subject of education from his perspective. Over time, his knowledge of the professor's knowledge and attitudes - derived from the experience that endorses or rejects the teachings of the professor - increases.

Formulating the interviewees' opinions indicates that knowledge and ability occur in the context of attitude. In other words, it seems that the professor's attitude towards the topic of design implies how he or she is able to transfer knowledge and ability to the apprentice.

According to the interviewees, education is influenced not only by the professional attitude of the professor but also by his attitude towards the world. If we consider knowledge and ability as teaching materials, the language in which the professor expresses knowledge and competence is a great attitude. This attitude can be appropriate or inappropriate, temperate or extreme, inclusive or partial, and true or false, but it is undoubtedly the only language that the professor expresses his or her design preferences and perspectives. As a result, the apprentice is also among the type of professor's attitude to the topic of design, is affected by it, and might be called flowing in the design process (Figure 3).

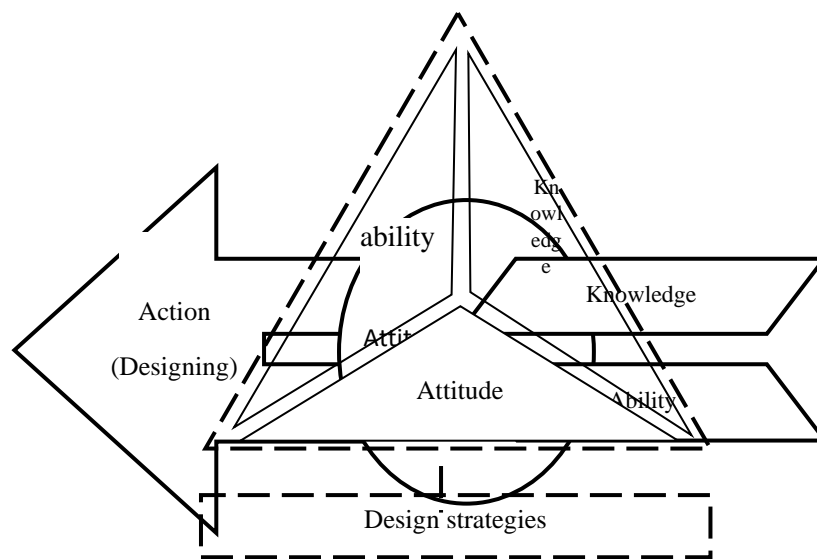


Figure 3. Design strategies are derived from the student's set of knowledge, abilities, and attitudes. (Source: Authors).

It was mentioned that the apprentice had to look at subjects like a professor and this would continue at least until he understood the purpose of the professor correctly and had the opportunity to compare his attitude with other attitudes. In addition to the great view of architecture, the professor's attitude also shapes the apprentice's design priorities, and just as the child imitates his father's moods and priorities in different ways, the apprentice also imitates his professor's creations, and as a result, they will have similar approaches and priorities when it comes to problem solving. In addition to the skill of doing the work, the apprentice learns from the professor the skill of decision-making and even the skill of discovering the primary generator and the art of entering the problem situation (Figure 4).

Conclusion

A number of factors influence the quality of transmission and the development of values and attitudes in the process of architectural education. The apprentice is influenced by a number of reasons for the professor and is taught the values and attitudes of the subject that are originally derived from the values and

attitudes of the professor, and depending on how much his experience and future studies weaken or reinforce this view, it will be accompanied by a look at the process. This influence will remain the basis of his attitude, and even the basis of his future evaluations. The results of the present study also indicate the key role and impact of the personal characteristics of the professor in the development of apprentice values and attitudes, as the characteristics of the professor account for more than half of the interviewed codes. Although the base of these transitions is the professor and his effective attributes, the properties of apprentice - as the recipient of these values and attitudes - is of the utmost importance and in the absence of those effective attributes, the possibility of this transfer and its quality is reduced. Therefore, the characteristics of apprentices in this process are of secondary importance. The foundation of design skill is the values and attitudes that emerge in the apprentice's mind, which include the type of apprentice's view of the subject of design and its entry into the problem situation. These values establish the apprentice policy, but depending on his/her personal experience, he/she is effective in obtaining apprentice view and practice.

In addition to the characteristics that are generally effective for the professor, many other characteristics illustrate the wide range of professors' influence and apprentice' effectiveness and their improvement in professor and apprentice can contribute to the teaching process.

During training, the professor transmits his values and attitudes to the apprentice in the process of transferring knowledge and abilities, consciously or unconsciously, and if the professor pays special attention to this issue, he or she can transfer a holistic view to the apprentice as a valuable legacy with a thoughtful design of exercises. Based on research, the professor of architecture can be categorized in a range of influential to ineffective individual so that the scope of the professor's effectiveness can be enhanced from one level to another, thus adding to the richness of the training and speed of the architectural expertise process. In many cases, the present study only refers to an effective factor in the process of transferring and developing values and attitudes, which, given the entry of these cases into the various fields of science, the identification and explanation of its dimensions are subject to further research.

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