

# Insights into Experiential Pedagogy, Volume 6, 1979

## INTERPERSONAL COMPETENCE AND THE DIGITAL PDP-11:40

George T. Solomon, The George Washington University

### ABSTRACT

The purpose of this paper is to (1) define interpersonal competence based on Argyris' theory, (2) present a theoretical framework that outlines the conditions under which interpersonal competence can be acquired, (3) present a set of categories designed to measure interpersonal competence, and (4) introduce a new approach for dealing with and acquiring interpersonal competence.

The understanding and acquisition of interpersonal competence provides individuals one approach for effectively dealing with implicit and explicit interpersonal relationships. By effectively dealing with such relationships, individuals are provided an opportunity to increase their interpersonal competence. By increasing one's interpersonal competence, an individual is, in Argyris' terms, moving toward a state of mental/organizational health. As an individual moves toward a state of mental/organizational health, he tends to display behavior which supports coping competently with interpersonal relationships. There has been some confusion by theorists as to a clear and concise definition of interpersonal competence. Therefore it is logical that any discussion centered on the issue of interpersonal competence begins with a clear definition, to eliminate any confusion of terms.

### DEFINITION OF INTERPERSONAL COMPETENCE

Interpersonal competence is the ability to cope effectively with interpersonal relationships. Three criteria of effective interpersonal coping are:

1. Individuals perceive the interpersonal situation accurately. They are able to identify the relevant variables plus their relationships.
2. Individuals are able to solve the problems in such a way that they remain solved. If, for example, interpersonal trust is low between A and B, they may not have been said to solve the problem competently unless and until it no longer recurs.
3. The solution is achieved in such a way that A and B are still able to work with each other at least as effectively as when they began to solve their problem.<sup>i</sup>

The test of interpersonal competence is not limited to insight and understanding. Interpersonal competence is the function of an individual's ability (and the ability of others involved) to solve interpersonal problems. As such, this implies that to test the interpersonal competence developed in a learning situation, the individual(s) must show that the learning has transferred beyond the learning situation into a theory of practice. The aim, therefore, is to change behavior and attitudes in such a way that observable changes can be found in solving interpersonal problems outside the learning situation. Transfer of learning is a central issue in competence acquisition.<sup>ii</sup>

Having defined interpersonal competence, I would like to present a theoretical framework for acquiring interpersonal competence.

### THEORETICAL FRAMEWORK

Providing the conditions for the maximum transfer of learning is difficult in the interpersonal area. As such, certain basic requirements need to exist to facilitate effective transfer of learning. First, "it takes much practice to develop interpersonal skills because they are complex, and much unfreezing is usually required."<sup>iii</sup> Individuals have to commit themselves to deciding whether or not to abandon old "familiar" behaviors for new "untested" behaviors. The central issue for individuals is arriving at a conclusion which tends to support the contention that the old behaviors were ineffective in competently dealing with interpersonal relationships.

Second, "the individual must develop new modes of behavior that have been tested and found more effective than the old."<sup>iv</sup> Individuals must practice their new modes of behavior often enough so that they feel confident in their ability to use them.

Third, "individuals must develop new nodes of adjunct behavior that may be called for in the practice of their new modes of behavior."<sup>v</sup> It is important for individuals to learn how to exhibit their new behavior in such a way that they minimize the probability of causing others to become defensive or uncomfortable, thereby creating a potentially threatening environment.

Fourth, "the probability that an individual will behave in an interpersonally competent manner is not only a function of his own confidence in his abilities to do so; it is also a function of the others' confidence and willingness to behave in an interpersonally competent manner."<sup>vi</sup> Interpersonal competence is situational in nature and flat simply determined by individual or personal ability. Individuals thus will tend to exhibit more interpersonal competence among individuals and within environments which support the acquisition and display of competent behavior.

Finally, "the probability is very low that individuals can be taught everything they need to know in order to behave competently in most situations."<sup>vii</sup> Once the individual understands the theoretical framework the next step is to transfer that knowledge into new modes of behavior. The most important requirements in obtaining transfer of learning are: (a) good working knowledge of the new modes of behavior being adopted by the individual and (h) the ability to recognize how the new modes of behavior can be used in various situations and environments. Also, to develop interpersonal competence, individuals need to obtain the cooperation of those individuals involved in a particular situation or environment to generate the interpersonally competent behavior appropriate to the situation.

Experience and theory relevant to competence acquisition suggests that there are several key elements in the learning situation if these five requirements all are to be fulfilled. The individuals must learn how to (a) communicate with one another in a manner that generates minimally distorted information, (b) give and receive feedback that is directly validatable and minimally evaluative, (c) perform these skills in such a way that self-acceptance and trust among the individuals

## Insights into Experiential Pedagogy, Volume 6, 1979

tend to increase, and (d) create effective groups in which problem solving may occur.<sup>viii</sup>

The minimum requirement that each individual must meet (if they are to provide minimally distorted information) is that they manifest a relatively high degree of self-awareness and self-acceptance. The more individuals are aware and accepting of those aspects of their selves which are operating in a given situation (a) the higher the probability that they will discuss them with minimal distortion, and (b) the higher the probability that they will listen with minimal distortion.

Individuals can increase their self-awareness and self-acceptance by receiving minimally distorted feedback from others about their impact on them and by being willing to be accepting and understanding of that behavior, even though the individuals exhibiting the behavior may not be.

As the trust of self and others increases, the probability of giving and receiving valid information increases, and so does the probability of self-awareness and self-acceptance, which in turn increase the predisposition for more experiences of psychological success.<sup>ix</sup>

Feedback may be undistorted but not very helpful in creating behavioral change, self-acceptance and an effective group. For information to be most helpful it should be directly verifiable, minimally evaluative, and minimally contradictory.

The first major characteristic of helpful information, that it be directly verifiable, is important to distinguish information that can be verified directly by self and by others from information that can be validated only by reference to some conceptual scheme. The first type of feedback includes categories of behavior that are directly observable. "When you shout at me I become defensive and extremely anxious." The second type of feedback uses categories that are inferred. "According to Mon, I sense the group is operating in a basic assumption mentality of fight-flight."<sup>x</sup> The more the information used in the learning situations is composed of inferred categories that refer to a conceptual scheme, the greater the dependence of the individuals upon the conceptual scheme if they are to verify the information presented.

The second major characteristic of helpful information is that it be minimally evaluative of the recipient's behavior for two specific reasons. One, such information reduces the probability of making the receiver defensive because it creates conditions favorable to an increase in active listening. Two, minimally evaluative information describes how the receiver feels about the sender's message without describing it as "good" or "bad."

The third major characteristic of helpful information is that its meaning is consistent. Contradictory feedback tends to create a double bind in the mind of the receiver. Individuals tend to dislike the anxiety created by dual messages such as "I love you, but get lost." The acquisition of interpersonal competence requires that individuals learn to minimize the contradictory messages that they intentionally communicate to others.

To summarize, the probability of learning to behave more competently and to transfer this learning beyond a learning situation increases:

1. As the individuals' self-awareness and self-acceptance increases, and as their acceptance and trust of others increase.

2. As the individuals learn to communicate with others in a manner which generates minimally distorted information and which gives and receives feedback that is directly verifiable, minimally evaluative, and consistent.

Having presented a theoretical framework for acquiring interpersonal competence, I would like to present a set of categories designed to measure interpersonal competence.

### CATEGORIES TO MEASURE INTERPERSONAL COMPETENCE

To increase an individual's ability to become interpersonally competent, one must be able to measure the individual's movement to becoming interpersonally competent. It becomes important, therefore, to select criteria for measuring the individual's movement based on verifiable and observable actions, attitudes and behaviors. All interpersonal relationships are based on actions and reactions of the individuals involved in the interaction changes in the individuals' behavior can be measured and provide a valid criteria for categorizing different behaviors.

Argyris perceives that all behavior manifested by individuals can be viewed as having two basic components: emotional or feeling (f), and ideational (i). In his view, individuals exhibiting the first component of behavior tend to communicate their feelings to others by making statements such as "I am feeling anxious.. or "I hate you.. " Individuals exhibiting the second component of behavior tend to communicate their ideas to others by making statements such as "In my opinion or "My idea was.. He also supports the hypothesis that all behavior exists at two levels, individual and group. "Behavior can be categorized at two levels: Level I, referring to the individual or interpersonal aspects, and Level II, referring to the cultural aspects of behavior which may be designated as norms."<sup>xi</sup>

In Argyris' opinion, all behavior can be further broken down into two basic sub-units: competent and incompetent. In his view, individuals exhibiting competent behavior at Level I tend to be more willing to (a) own up to their feelings--"I am feeling..." (b) be open to new ideas and feelings--"Please go on, I am interested in your thoughts..." and (c) be willing to experiment with new ideas and feelings--"I am willing to try.. In the same light, individuals exhibiting incompetent behavior at Level I tend to be more likely to (a) not own up to their feelings--"I am not upset" (although flustered and redfaced), (b) not be open to new ideas or feelings--"I don't want to hear and (c) reject experimentation--"I refuse to participate..

At Level II, the basic unit of observation is not one's interpersonal behavior but the cultural norms of the system. "Norms may be thought of as developing from those interactions among the individuals that have proved useful (to the individuals) in maintaining the system."<sup>xii</sup> Norms are commonly perceived and approved patterns of behavior that act to influence the behavior of those individuals who desire to remain in the system.

Argyris views three basic norms as contributing to the acquisition of competence: (a) individuality, (b) concern, and (c) trust. In the same regard, he views three other basic norms as contributing toward the acquisition of incompetence: (a) conformity, (b) antagonism, and (c) mistrust (see Figure 1).

After conducting extensive research, Argyris demonstrated significant correlations between certain norms of behavior, Level II, and specific types of individual

# Insights into Experiential Pedagogy, Volume 6, 1979

FIGURE 1  
MATRIX OF INDIVIDUAL BEHAVIOR

LEVEL I

COMPETENT	CATEGORIES	INCOMPETENT
<u>Owning Up (i or f)</u> . That behavior which indicates being aware of and accepting responsibility for the behavior that is manifested. The individual is able to identify his/her behavior, communicate it, and accept ownership for it.		<u>Not Owning Up (i or f)</u> . That behavior which indicates being unable to be aware of, identify, and own up to one's actions.
<u>Openness (i or f)</u> . That behavior which enlarges the individual's scope or pushes back his/her boundaries of awareness and responsibility. The individual permits and encourages the reception of new information.		<u>Not Open (i or f)</u> . That behavior which constricts the individual's boundaries of awareness and responsibility. The individual discourages the reception of new information.
<u>Risk Taking/Experimenting (i or f)</u> . That behavior which represents some risk for the individual. The purpose of the risk taking is to generate new information on the i or f level. The individual may be observed manipulating his internal or external environment in order to create new information. The risk is evaluated in terms of the probability that such explorations could upset the individual's self-esteem.		<u>Rejecting Experimenting (i or f)</u> . That behavior which prevents the individual from taking risks.

LEVEL II

MATRIX OF NORM  
CATEGORIES OF  
BEHAVIOR

COMPETENT	INCOMPETENT
<u>Individuality</u> . That behavior which acts to induce individuals to express their ideas or feelings. The norm acts to influence the members to protect and develop the uniqueness of the individual in a group or organization.	<u>Conformity</u> . That behavior which acts to inhibit individuals from expressing their ideas or feelings. The norm acts to influence the members to help suppress the uniqueness of the individual in a group or organization.
<u>Concern</u> . That behavior which acts to induce people to be concerned about other's ideas and feelings. The norm acts to influence the member to help protect and develop the uniqueness of other's ideas and feelings in a group or organization.	<u>Antagonism</u> . That behavior which acts to induce people to reduce their concern about their own and other's feelings.
<u>Trust</u> . That behavior which induces members to take risks, to experiment, on the idea (i) and feeling (f) level.	<u>Mistrust</u> . That behavior which restricts and inhibits members from taking risks and experimenting.

behavior, Level I.

He was able to show that:

1. "Helping others to own frequently led to a norm of concern because helping others was showing concern for others.
2. Experimenting with one's feelings and ideas frequently led to trust because experimentation in-

cluded taking risks, and taking risks is the major criteria of trust.

3. Openness could lead to concern if one was open to understanding others, and allowed individuals to focus on themselves.
4. Not helping others to own led to conformity because it attempted to require them to behave as the actor desired."<sup>13</sup>

## Insights into Experiential Pedagogy, Volume 6, 1979

To summarize, Argyris assumes: that most behavior consists of two basic components--emotional or feeling (f) and ideational (i); that behavior exists on two levels

--Level I, interpersonal/individual behavior, and Level II, group norms (cultural aspects) of the particular organization or system; that all behavior, regardless of level or basic components, is divided into two major classifications--competent and incompetent; that individuals and organizations seeking to remain "healthy" and effectively use the psychic energy available need to understand and acquire the basic elements of interpersonal competence; and that certain norms of behavior in organizations/systems are correlated with specific types of individual behavior.

Having explained and illustrated a set of categories designed to measure interpersonal competence, I would like to present a new approach to acquiring and dealing with interpersonal competence.

### A NEW APPROACH TO ACQUIRING AND DEALING WITH INTERPERSONAL COMPETENCE

The central issue in acquiring and dealing with interpersonal competence is to be given ample opportunity to understand and practice new modes of behavior. Since one cannot deal effectively with the issues of interpersonal competence alone, one needs to find another individual with whom to practice the new modes of behavior. To this end, I have developed a computer simulation exercise which allows individuals the opportunity to practice and develop modes of behavior that provide them the opportunity to be interpersonally competent.

The computer simulation exercise was designed to be used with the Digital PDP-11 interactive computer because it allows individuals to respond and to receive feedback immediately from the computer.

#### Computer Simulation Exercise

The simulation exercise contains twenty-two situations! dilemmas which are displayed sequentially. After a particular situation/dilemma is displayed, the individual is required to generate a response to that particular situation/dilemma.

Responses to the various situations/dilemmas require individuals to use elements from a sample vocabulary which is printed and distributed prior to beginning the exercise. The vocabulary contains sufficient nouns, verbs, modifiers and conjunctions to construct an adequate response in each case. The purpose in using the sample vocabulary is to allow the computer to rate the responses from the individuals. The basis for rating the individual response is Argyris' theoretical framework for competence acquisition and the set of categories he designed to measure interpersonal competence. Both areas have been discussed earlier in the paper.

Once the individual response is rated, the computer in turn responds to the feedback from the individual. In all cases, if the individual responds incompetently to the situation/dilemma, as rated by the computer, the computer will respond back with an incompetent message. The purpose of this design is to keep all communications relatively congruent.

If the individual responds incompetently to any given situation/dilemma, the system also is designed to allow the individual an opportunity to repeat the given situation/dilemma in an attempt to foster learning by attempting to correct the mistake

from the initial encounter. The individual has the option to repeat the exercise or to move on to the next situation/dilemma. If the individual chooses to engage again in the same situation/dilemma, he will be allowed one additional opportunity and then will be shown the next situation! dilemma.

If an individual responds competently, as rated by the computer, the computer will respond back with a competent message and display the next situation/dilemma. The individual's role is to deal with each situation/ dilemma as a complete and separate entity, until all twenty-two situations/dilemmas are displayed or the individual quits. Individuals may engage in the exercise as many times as they feel they need to do so.

The exercise is an attempt to give participants the opportunity to learn new behavior(s) and attitude(s) and to support movement toward being interpersonally competent. The exercise allows individuals an opportunity to practice and develop interpersonal skills. It also allows the participants to experiment and develop new models of behavior to become confident in their ability to use them. Also, the computer will, be constantly offering feedback which can help the individual understand which behaviors manifested in the communication link are competent or incompetent, in Argyris' terms.

The use of the computer allows individuals an opportunity to engage in an interaction with a non-biased member. Also, most communications from the computer will be minimally distorted, evaluative, attributive or contradictory. Constant reinforcement of valid feedback may support movement toward being interpersonally competent. As such, it will be supporting individuals to become more open to new ideas and feelings. It also will support individuals' rights to own up to their feelings and ideas without fear of punishment. Overall, the computer simulation exercise serves to create an environment supportive of the individual(s)' desire to experiment with new and relatively untested behaviors.

### CONCLUSION

I have attempted in this paper to offer (a) a definition of interpersonal competence, (b) a theoretical framework for acquiring interpersonal competence, (c) a set of categories for measuring interpersonal competence, and (d) a new approach using the Digital PDP-11 interactive computer for acquiring interpersonal competence.

The use of an interactive computer simulation exercise as an approach to developing an individual's interpersonal competence is relatively new and, as such, will require further research and experimentation to improve my initial effort.

Computer simulation exercises such as mine are beginning attempts by behavioral scientists to use previously untested vehicles to deal with the numerous issues in the field of behavioral science. As management adapts more to technological innovation, so too will creative consultants, trainers and educators integrate the behavioral theories into practical exercises using this advanced technology. The dawn of the man-machine interface is upon us and offers individuals a further opportunity to expand and explore the dynamics of human behavior.

# Insights into Experiential Pedagogy, Volume 6, 1979

## APPENDIX I VOCABULARY

### NOUNS

Doctor  
Dollar  
Lawyer  
Legs  
Money  
Nomination  
Organization  
President  
Professor  
Sir  
Sis  
Sister

### PRONOUNS

I  
Me  
Mine  
My  
We  
Us  
Myself  
You  
Yours  
He  
She  
It

### ADVERBS

Also  
Anyway  
No  
Not  
Really  
So  
Terribly  
Too

### VERBS

Am  
Are  
Begin  
Believe  
Bet  
Break  
Can  
Choose  
Come  
Decline  
Did  
Discuss  
Do  
Done  
Dream  
Feel  
Fight  
Forbid  
Get  
Give  
Go  
Got  
Gotten  
Guess  
Had  
Has  
Have  
Hear  
Heard  
Help  
Hold  
Is  
Knew  
Know

Known  
Lend  
Lent  
Loaned  
Looked  
Love  
Mean  
Meet  
Met  
Refuse  
Run  
Saw  
Say  
See  
Seen  
Shall  
Should

Sit  
Speak  
Stand  
Take  
Taken  
Talk  
Teach  
Think  
Took  
Was  
Went  
Were  
Will  
Write  
Written  
Wrote

### CONJUNCTIONS

And  
At  
But  
By  
For  
Goodbye  
Hello  
Hi  
Hm  
In  
Oh  
Yes

### ADJECTIVES

Afraid  
Anxious  
Any  
Attractive  
Bad  
Beautiful  
Best  
Better  
Careful  
Easier  
Easy  
Eight  
Fabulous  
Fair  
Fantastic  
Few  
Fifty  
Fine

Five  
Good  
Great  
Happy  
Hundred  
Indifferent  
Little  
Many  
More

Most  
One  
Sad  
Second  
Some  
Sorry  
Sweet  
Terrible  
Terrific

That  
There  
These  
This  
Those  
Thousand  
What  
Which  
Whose  
Wonderful

## APPENDIX II COMPUTER SIMULATION INSTRUCTIONS

### INDIVIDUAL'S ACTION

1. Individual should turn on the terminals, unless they are already on. (Please make sure you turn the select button to ON not LOCAL, otherwise it will type without accessing the computer.)
2. After the terminal is turned on, the individual should type in "HELLO".\*

\*(This appears simultaneously on the print sheet as you type) and then hit the carriage return key (CR).

### SYSTEM'S RESPONSE

1. School of Government and Business Administration  
PDP 11/40 RSTS V4A JOB # \_\_\_\_\_, Day Month, Year

and Time. Then the system will ask you for the account number.

3. Individual should type in "210,20" and then hit the carriage return key (CR).

2. System will ask you for the password.

4. Individual should type in "GEORGE" and then hit the carriage return key (CR).

\*\* (As you type the letters for the password, nothing will appear on the paper for security reasons.)

3. At this moment, the system will bring a number of messages onto the paper. The procedure will end when the system prints the message READY.

5. Individual should then type in "RUN ARGYRS" and then hit the carriage return key (CR).

4. The program is now loaded and is ready to run. It will then ask you if: "INSTRUCTIONS ARE NEEDED?"

6. Individual should then type in YES or NO. Individual should only wish to see the instructions in cases where they have neither experienced the exercise or obtained a copy of this handout previously.

The instructions for accessing this exercise are as follows:

Good day, welcome to our session on Interpersonal Competence. The following instructions are provided for your benefit:

This exercise contains twenty-two situation(s)/dilemma(s) which will be displayed sequentially. Your role is to deal with each situation/dilemma as a complete and separate entity, remembering at all times that your response is needed.

Immediately proceeding this section, you will be asked if you need to see the sample vocabulary listing. The listing contains various parts of speech needed to construct your response to the particular situation/ dilemma. If you have obtained a copy of the vocabulary prior to beginning this exercise, you should respond by saying, "No," at which time the program will display the first situation/dilemma.

If you have not received the vocabulary handout prior to the beginning of this exercise, you should respond by saying "Yes," to seeing the vocabulary. The vocabulary will then be listed. Immediately after the vocabulary is listed, the program will display the first situation/dilemma.

After each situation/dilemma is displayed, you are required to respond to that particular event; keep in mind that your response should contain parts of the vocabulary presented, either in the handout or in the program.

If you feel the need to use parts of speech not in the vocabulary listed, make sure that at least 50% of the response contains parts of speech from the listed vocabulary. You need to end your responses with a period in each situation/dilemma. All responses must have a minimum of five words.

After each response is entered into the system, the individual should then hit the carriage return key-- (herein referred to as CR). Once your response is entered into the system, the system will rate

your response and feedback a response congruent with your response.

The computer's basis for rating your response will be Argyris' theory of Interpersonal Competence. The computer will scan your response, looking specifically for certain conditions to exist which would classify your response as incompetent. These conditions are whether you spoke in the third person, in the past or future tense, and finally, if you made evaluative and attributive statements. If your response has at least three of these conditions existing, your response will be rated incompetent.

1                      1                      1                      1

(i.e., 1 "They should have been careful with my sweet attractive wife" = 5, incompetent.)

If, in the opinion of the computer, you have not handled yourself in a competent manner (in Argyris' terms), you will be given another opportunity to respond to the same situation/dilemma.

The computer will ask you if you wish to respond again to the situation/dilemma. You will type either "Yes" or "No" and then hit the (CR) key. If you type in "Yes" then you will be allowed to input another response. As before, the computer will rate the response and give a congruent reply. The process will take place only once in each situation/dilemma.

If at any time you wish to cease operations, you should hit the control key and the letter "C" simultaneously. The system will print "C" and go to the end of the program.

When you have either finished all twenty-two situation(s)/dilemma(s) or have hit "C", you should then type "EYE". The system will then echo your statement of "BYE" and ask you to "CONFIRM". You will type into the system "YES" and the computer will sign off.

# Insights into Experiential Pedagogy, Volume 6, 1979

## REFERENCES

- [1] Argyris, Chris. "Explorations in Interpersonal Competence I." Journal of Applied Behavioral Science, 1956, 1 (3), pp. 58-83.
- [2] \_\_\_\_\_, "Conditions for Competence Acquisition and Therapy," Journal of Applied Behavioral Science, 1968, 4 (2), pp. 147-177.
- [3] Bion, W. R. Experiences in Groups. New York, New York: Basic Books, 1959.

## ENDNOTES

- 
- <sup>i</sup> Chris Argyris, "Conditions for Competence Acquisition and Therapy," Journal of Applied Behavioral Science. Vol. 4, No. 2: p. 148.
  - <sup>ii</sup> Ibid.
  - <sup>iii</sup> Ibid.
  - <sup>iv</sup> Ibid., p. 149.
  - <sup>v</sup> Ibid.
  - <sup>vi</sup> Ibid.
  - <sup>vii</sup> Ibid. p. 150
  - <sup>viii</sup> Ibid.
  - <sup>ix</sup> Ibid., p. 154.
  - <sup>x</sup> W. R. Bion, Experiences in Groups. (New York, New York: Basic Books, 1959), pp. 63-65.
  - <sup>xi</sup> Argyris, p. 154.
  - <sup>xii</sup> Chris Argyris, "Explorations in Interpersonal Competence - I," Journal of Applied Behavioral Science. Vol. 1, No. 1: p. 61.
  - <sup>xiii</sup> Ibid., p. 64.
  - <sup>xiv</sup> Ibid., p. 65.