

Styles of Creativity: Adaptors and Innovators in a Singapore Context

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Kirton (1976) described two creative styles, namely adaptors and innovators. Adaptors prefer to “do things better” whilst, innovators prefer to “do things differently”. This study explored the relationship between two creative styles (adaptor and innovator) and the Big Five personality traits (extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience) and how they subscribe to creativity, risks and goal orientations. A total of 206 Polytechnic students from Singapore completed a self-report questionnaire, which consisted of the Kirton Adaptation-Innovation Inventory (Kirton, 1976), NEO-Five Factor Inventory (Saucier, 1994), Learning Goal Scale (Ng, 2003), What Kind of Person Are You Self-Report Inventory (Khatena & Torrance, 1976), Gough’s Creative Adjective Checklist, Risk Scenario, and Risk Taking Attitude Scale developed by Ng. It was found that adaptors were significantly more conscientious and subscribe to risk avoidance, ego approach and ego avoidance orientations than innovators, whilst, innovators were significantly more extraverted and open to experience and are likely to subscribe to creativity, risk taking and mastery goal orientations than adaptors. No significant differences were found between adaptors and innovators in agreeableness. The implications for the findings for the classroom teacher will also be discussed.

Key words: creativity styles, adaptors, innovators, personality traits, goals, creativity, risk-taking

Introduction

In Howard Gardner’s *Five Minds of the Future* (2007), he emphasized the importance of the creative mind.

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Researchers have long known that different people have different creative styles e.g. Kirton (1976). Creative style is a qualitative construct that looks at the different ways in which different people express their creativity. Kirton (1976) proposed an adaptation-innovation continuum, in which individuals who are located on one end of this continuum are adaptive, while those who are on the other end are innovative. The adaptation-innovation continuum is assumed to be a dimension of creative style, that is, stable within time and across situations and has links to certain personality traits (Kirton, 1999). Both innovators and adaptors are equally creative, the only difference being how they express their creativity. Adaptors operate within a framework of systems and are associated with sufficiency of originality, efficiency and rule-group conformity whereas,

innovators break away from the existing framework of systems and are associated with high interest levels in terms of originality of ideas, less concern for efficiency and rule-group conformity. Adaptors prefer to create change by improving on the existing structure and favour staying in groups (Kirton, 1994). In addition, they maintain cohesion by following the accepted ways and prefer to solve problems in a disciplined, methodical and predictable manner. On the other hand, innovators often come up with many new and practical ideas and are risk-oriented (Kirton, 1994). They prefer to stay as individuals and create change by altering the existing paradigm (Kirton, 1994).

According to the adaptation-innovation continuum theory, the more that cultural sanctions impose limitations on the individual, the more innovative the individual has to be to overcome the sanctions. A good example is the Singaporean context, where politics are somewhat spoken of behind closed doors. In one instance, an individual developed a website (Mr Brown.com) to speak out against some elements of society's governance in an indirect manner. Thus, although the creative style is a personal preference, there are implicit social and cultural dimensions in Kirton's (1976) scale. The success of innovation depends on the cultural and social context of the environment – in particular, how rigidly governed by rules a society or institution tend to be. Thus, the innovativeness of the society may differ in terms of the level of expected rule-group conformity expected across social situations. McHale and Flegg (1986) found that teams composed primarily of adaptors or innovators were very different in their style of working when presented with a problem on a team-building seminar. One team with three highly innovative people found it difficult to work together but produced a highly imaginative proposal as a solution to the problem. The other team that was primarily composed of adaptors produced a solution to the problem that conformed to the guidelines but its contents were unexciting and had not made full use of all the available resources. Thus, it can be seen that innovators and adaptors have very different working styles.

The Kirton Adaptation-Innovation inventory (KAI), developed by Kirton, is used to gauge whether a person's creative style is towards the adaptive or innovative end (Kirton, 1994). There are three facets in the KAI that correspond to three factor traits. Sufficiency of Originality (SO) refers to a preference for producing a few

implementable solutions to problems. Rule Governance (R) refers to a social tendency to maintain workgroup cohesion by doing things in accepted ways. Efficiency refers to a bureaucratic concern for being exact, systematic and disciplined. Bagozzi and Foxall (1995) found that adaptors tend to produce fewer implementable solutions to problem and are more compliant and bureaucratic within the workgroup. In contrast, innovators tend to be brimming with ideas, flout rules and display little concern with bureaucratic details. This study further supports the results found by McHale and Flegg (1986) on the different working styles adopted by innovators and adaptors. Taken together, these findings indicate that innovators and adaptors operate on two ends of a continuum and as a result, would tend to have difficulties if working together.

Difference in personality traits can affect creativity styles. Research had shown that creative style is correlated with more than 30 different personality traits. Gelade (2002) demonstrated that many of these correlations could be understood within the framework of the Five-Factor Model of personality. This model asserts that there are five basic personality traits. Neuroticism refers to individuals who are primarily characterized by a tendency to experience the states of negative affect. Extraversion refers to individuals who are assertive, active, cheerful and high-spirited individuals who are happiest in the company of others. Openness to experience refers to individuals who are inquisitive and ready to contemplate radical ideas, new experiences and unconventional values. Agreeableness refers to individuals who are friendly and sympathetic toward others and generally adopt an optimistic outlook in interpersonal matters. Conscientiousness refers to individuals who are purposeful, disciplined, strong-willed and reliable. Gelade (2002) found that the predominant correlates of creative style are personality indicators in the domains of Openness to Experience, and Extraversion.

The NEO-Personality Inventory-Revised (NEO PI-R) (Costa & McCrea, 1992) is a 240 statement questionnaire measure of the five-factor model that is widely regarded as the standard representation of the five-factor model of personality. Gelade (1997) examined the relationship between the five-factor model of personality and creativity. He found that creative people break away from conformity and social norms and take pride in their work. In addition they are independent and complex persons. His findings

showed that commercial creative types report considerably higher levels of neuroticism and openness to experience than professionals of a similar age working in occupations that are not evidently creative.

The willingness to take risks can also account for creative achievement. Dunbar (1997) noted the importance of risk-taking in scientific discovery in the field of molecular biology. He found that there was variability across labs in their ability to achieve creative insights, but the cognitive processes involved did not vary. However, a difference was shown in the scientists' willingness to take risks, their willingness to try a new procedure, examine an unexplained phenomenon, or propose a wild new theory to explain the data. Thus, a higher willingness to take risks is related to creative achievement.

In the school context, psychologists have long known that different students adopt different learning goals. Learning goals refer to the goal that motivates students to work hard in their studies (Ee, 1998; Ng, 2001). There are two kinds of goals that students can adopt in their studies. The first is the task goal, where students are intrinsically motivated to master a certain topic, unconcern with how they will appear to significant others like parents, teachers and friends (Nicholls, 1984; Biggs & Moore, 1993; Ee, 1998). The second is the ego approaching goal, where students in the learning situation are preoccupied with demonstrating their competence to significant others (Dweck, 1986; Ames, 1992; Ee, 1998). When a student adopts an ego approach goal, powerful extraneous forces such as evaluation pressure and social comparisons suppress the more creative forms of problem-solving (Amabile, 1996; Ee, 1998). In contrast, when a person adopts a mastery goal and is involved in tasks, the person is engaged in the activity and this orientation provided a more flexible and less rigid manner (Csikszentmihalyi, 1990; Isen, Daybnabm, & Nowicki, 1987). The ego avoidance goal has a tendency to avoid difficult tasks for fear of failure. According to Ng (2003), creative behavior is task-involved, while uncreative behavior is ego-involved, and especially, ego avoidance-involved.

A review of the above literature suggests that these two creative styles; adaptor and innovator differ in many ways e.g. creative styles, personality, risk-taking and in the adoption of learning goals. Thus, the research will explore the psychological correlates of the two different types of

creators, namely, adaptors and innovators.

Research Questions

1. Do adaptors and innovators differ in terms of their creative attributes?
2. Do adaptors and innovators differ in terms of their basic personality traits?
3. Do adaptors and innovators differ in their propensity to take risks in learning?
4. Do adaptors and innovators subscribe to different goals in learning?

Methodology

Sample

There were altogether 206 Polytechnic students who participated in this study. These

students are attending an institution of higher learning which offers diploma courses to equip them with

skills currently in demand, that is, in terms of employability. Their mean age is 18.2.

Procedure

Data collection was done over several months in 2004. Lecturers were approached to grant the researchers the opportunity to solicit participation from their students. The respondents' participation was on a voluntary basis in responding to the research survey containing the various psychological scales, as described below.

Kirton's Adaption-Innovation Inventory (KAI), developed by Kirton (1991), is used to gauge whether a person's creative style is towards the adaptive or innovative end. There are 32 items that measure creative traits. Examples of adaptive items are "*conforms*" and "*enjoys detailed work*". Examples of innovative items are "*will sooner create than improve*" and "*comes up with plenty of ideas*". Respondents are required to rate how well each item describes them along a 5-point scale, ranging from 1 (item does not describe me well) to 5 (item describes me well).

The possible range of scores on the KAI is 32 to 160. A higher overall score indicates a more innovative orientation, whereas a lower overall score indicates a more adaptive orientation. Scores above 75% percentile indicates an innovative creative style whilst scores below 25% percentile indicates an adaptive creative style. In the third edition of the KAI manual, Kirton (1999) reported on a variety of studies that supported the reliability and validity of this measure of creative style.

The NEO-Five Factor Inventory is used to measure the five personality traits of the respondent, namely, extraversion, agreeableness, conscientiousness, neuroticism and openness to experience. This is a 40 item scale developed and validated by Saucier (1994). There are 8 mini-markers for each personality trait which may be positively or negatively worded. For example, for the Extraversion trait, items such as *extroverted*, and *bashful* (reversed scored) are included. For the personality trait of agreeableness, items such as *cooperative*, and *cold* (reversed scored) are included. The *Conscientious* trait consists of items such as *organized* and *careless* (reversed scored) and, the Neuroticism trait includes mini-markers like *moody*, and *relaxed* (reverse-scored). The personality trait of *Openness to Experience* consists of items such as *creative* as well as *uncreative* (reverse-scored). Respondents are required to indicate how strongly they agree or disagree with each item, based on a 5-point scale, ranging from 1 (*extremely inaccurate*) through 3 (*undecided*) to 5 (*extremely accurate*). The relevant items from a certain subscale are reverse-scored and added together; this summative score is a measure of the respondent's score on that particular Big Five personality trait. The validity of the NEO-FFI has been established by various researchers (e.g. McCrae & Costa, 1987).

Learning Goal Scale (Ng, 2003). This is a 15-item scale which is used to measure mastery orientation, ego-approach orientation and ego-avoidance orientation. 5 items were used to measure each learning orientation. An example of a mastery item is "*I tend to read deeply into a particular topic and become totally absorbed in it*". An example of an ego-approach item is "*I judge my test performance based on whether the score I obtain is among the highest in class*". An example of an ego-avoidance item is "*I constantly worry*

about the possibility of failing in a task". The respondents indicated how strongly they agreed with each item, based on a 5-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Mastery orientation is represented by the sum of the 5 task items, an ego-approach orientation is represented by the sum of the 5 ego-approach items, and an ego-avoidance orientation is represented by the sum of the 5 ego-avoidance items. Using confirmatory factor analysis, Ng (2003) found that the Learning Goal Scale fitted into a 3 factor structure, in accordance with the three orientations being measured, attesting to the construct validity of this scale.

"What Kind of Person Are You?" Self-Report Inventory or WKOPAY was adapted from Khatena & Torrance (1976). It consists of 50 forced-choice items which have been found to differentiate between creative and uncreative individuals. An example is "independent in judgment" versus "considerate of others". Respondents decided which items in the pair described themselves better. The total creativity score is calculated by summing up those items which are typically chosen by creative people, and it can range from 0 to 50. The WKOPAY demonstrated adequate test-retest reliabilities, ranging from .71 to .97. Its construct validity was established via its link with other creativity measures, like the Torrance Test of Creative Thinking.

Gough's Creative Adjective Checklist is used to measure how creative the person is. The respondent indicates the extent to which creative traits (e.g., unconventional, inventive) and uncreative traits (e.g., cautious, commonplace) are good descriptions of himself.

Risk Scenario Scale. This scale is specially constructed to measure the risk orientation of the respondent. It consists of 6 scenarios dealing with typical encounters of a student. In each scenario, there are two options for the respondent to choose from. One option represents the risk-taking orientation, while the other option represents the risk-avoiding orientation. Respondents indicate the attractiveness of each option using a 7-point scale. A higher score indicates that the option is attractive to the respondent and vice versa. Both the risk-taking and risk-avoiding orientations are calculated by summing up the relevant

options in the given scenarios. A scenario with its two options is given as an example:

A student has to make a choice between working on a current project that is led by a competent leader who follows established procedures closely, or embarking on a new project with a newly set-up group that involves research in an unexplored area. The first group project has a good chance of adding useful findings to what has already been discovered, while the second group project has the possibility of either making a new discovery or failing to find anything important at all.

If you were the student in this situation, how attractive would you find each of the following alternatives? Indicate your response by circling a suitable number below each alternative (“1 = least attractive” to “7 = most attractive”).

Alternative A: I would work on the first group project (risk-taking option).

Alternative B: I would work on the second group project (risk-avoiding option).

Data Analysis

Means and standard deviations were used to describe the tertiary students’ creative style, creativity, risk-taking and learning goals. Subsequently, MANOVA was used to test if there were any significant differences between adaptors and innovators before proceeding to use an ANOVA to test if there were significant differences in the variables between adaptors and innovators. In examining the effects of adaptors and innovators on creativity, risk-taking, personality traits and goal orientations, Binary Logistic Regression in SPSS was used.

Results

The internal reliabilities of the scales ranged from 0.57 to 0.82 and the mean and standard deviation of KAI were 101.54 and 13.25 respectively. To establish the validity of the Risk Scenario Scale, which has been specially constructed for this study, the data was subjected to principal axis factoring. Using the method of direct oblimin,

two factors were extracted which accounted for 27% of the total variance. For the first factor, only risk-avoiding items were loaded, with factor loadings ranging from 0.34 to 0.63. For the second factor, only risk-taking items were loaded, with factor loadings ranging from 0.36 to 0.63. Hence the first factor is risk-avoiding, while the second factor is risk-taking.

Do Adaptors and Innovators Differ in terms of their Creative Attributes, Personality Traits, Risk-Taking and Goals for Learning?

Table 1 below shows the means and the standard deviations of the variables in the study. To answer the research questions relating to adaptors and innovators, the creativity style variable was defined according to Kirton’s practice, that is, the bottom 25% percentile for the adaptors and the top 25% percentile for the innovators. From Table 1, it can be seen that adaptors are respondents who have scores of 92 and below and innovators are respondents who have scores of 111 and above.

Having identified the adaptors and innovators in this study, an ANOVA was used on the two groups of adaptors and innovators. The results are shown in Table 1.

Singaporean innovators scored significantly more on creative (18.0, 13.1), $F = 13.6, p < .0001$; risk taking (25.1, 21.3), $F = 27.8, p < .0001$; mastery goal (20.5, 18.2), $F = 11.1, p < .0001$; extraversion (30.1, 25.6), $F = 9.8, p < .0001$ and openness to experience (30.8, 27.1), $F = 8.6, p < .0001$ measures than Singaporean adaptors. However, Singaporean adaptors scored significantly higher on conscientiousness (30.8, 24.4), $F = 21.1, p < .0001$, risk avoidance (21.0, 16.5), $F = 36.8, p < .0001$; ego approach goal (16.6, 13.3), $F = 8.5, p < .0001$ and ego avoidance goal (19.7, 15.6), $F = 16.5, p < .0001$ measures, than Singaporean innovators (Table 1).

Binary Logistic Regression in SPSS was used to examine the effects of adaptors and innovators on creativity, risk-taking, personality traits and learning goals of Singaporean tertiary students in Table 2. The table below denotes the innovators as the dependent variable with the adaptors as the reference category. Regressing the innovators under the sub-headings of creativity and risk taking, personality traits and learning goals, innovators were seen to be more likely to adopt risk taking ($OR = .71, p < .05$), being extraverted ($OR = 1.18, p < .0001$) and open to

Table 1
Reliability & ANOVA Results for Singapore Adaptors and Innovators

	Internal Reliability	Mean Score of Adaptors	Mean Score of Innovators	ANOVA Results
Creativity	.60	13.1 (4.3)	18.0 (4.5)	F = 13.6, p<.001
Risk Taking	.60	21.3 (2.2)	25.1 (2.4)	F = 27.8, p<.001
Risk Avoidance	.63	21.0 (2.9)	16.5 (2.8)	F = 36.8, p<.001
Mastery Goal	.57	18.2 (2.8)	20.5 (2.1)	F = 11.1, p<.001
Ego Approach Goal	.82	16.6 (4.3)	13.3 (4.4)	F = 8.5, p<.001
Ego Avoidance Goal	.74	19.7 (3.0)	15.6 (4.3)	F = 16.5, p<.001
Extraversion	.78	25.6 (5.1)	30.1 (5.3)	F = 9.8, p<.001
Agreeableness	.78	30.5 (4.1)	31.0 (4.6)	F = 0.2, n.s.
Conscientiousness	.80	30.8 (3.7)	24.4 (5.5)	F = 21.1, p<.001
Neuroticism	.74	22.8 (4.3)	21.4 (5.0)	F = 1.3, n.s.
Openness to Experience	.75	27.1 (4.1)	30.8 (4.3)	F = 8.6, p<.001

Table 2
Regression of Variables on Singaporean Adaptors and Innovators

Variable	B	SE B	Wald	OR	Sig
Creativity & Risk-Taking					
Creativity	.06	.05	2.00	1.23	n.s.
Risk Taking	.21	.09	5.38	.71	.05
Risk Avoidance	-.35	.08	18.21	.52	.001
(Constant)	-.66	2.80	.06	1.07	n.s.
Personality Traits					
Extraversion	.17	.04	14.27	1.18	.001
Agreeableness	-.02	.05	.08	.99	n.s.
Conscientious	-.24	.05	27.53	.79	.001
Neuroticism	-.07	.04	2.56	.93	n.s.
Openness to Experience	.12	.04	7.49	1.13	.01
(Constant)	-1.09	2.55	.18	.34	n.s.
Learning Goals					
Mastery	.25	.08	10.38	1.28	.001
Ego Approach	-.07	.05	1.80	.93	n.s.
Ego Avoidance	-.13	.05	5.97	.88	.05
(Constant)	-2.69	1.80	2.23	.07	n.s.

Note. Innovators as dependent variable with adaptors as the reference category

experience (OR=1.13, p<.01), and mastery oriented (OR=1.28, p<.001), and less likely to adopt risk avoidance (OR=.52, p<.001), conscientiousness (OR=.79, p<.0001), or

ego avoidance oriented (OR=.88, p<.05) than adaptors. This would suggest that the adaptors were more likely to adopt risk avoidance, conscientiousness and ego avoidance

and less likely to be risk takers, extraverted and open to experience and mastery oriented.

Discussion

In examining the relationship between creativity, risk orientations, achievement goals, and personality traits, innovators scored significantly higher in creativity, risk taking, mastery goal, extraversion and openness to experience compared to their adaptors. However, adaptors scored significantly higher on risk avoidance, ego approach, ego approach goal and conscientiousness.

Mastery goal, risk taking, extraversion and openness to experience are predictors of innovative behaviors whilst risk avoidance goal, ego avoidance goal and conscientiousness are predictors of adaptive behaviors

Could Polytechnic students consider that risk taking is a small measure of an innovative approach as they have nothing to lose as Singapore is a highly achievement-oriented environment and education is seen as highly valued? Furthermore, Singapore, on the other hand, is a place where rules and regulations are very well defined and especially known for being a “fine” city where inappropriate behaviors are fined or taken to court, adaptors are more likely to “tow the line” and be conscientious and risk-averse whilst, Singaporean innovators may in fact take risks but yet not be bold, daring and creative enough to make too great a difference.

This study contributes to the solid body of research suggesting that there are many individual differences between adaptors and innovators (Goldstein, 1994; Ng, Ang, Lee, Wong, Oei, & Leng, 2005; Ng & Rodrigues, 2002).

Our findings also suggest that both adaptors and innovators are achievement-oriented, but they subscribe to different types of achievement goals. Specifically, adaptors have the tendency to adopt ego goals and be risk-averse, whereas innovators have the tendency to adopt mastery goals and be risk-oriented.

Because of the individual differences between adaptors and innovators, it is easy for conflict to develop between these two creative types (see Kirton, 2000). Adaptors don't like to behave innovatively: it's against their nature to solve problems by *bending* rules. Similarly, innovators don't like to behave adaptively: it's against their nature to solve

problems by *following* rules (Ng, in press). To prevent such conflict from occurring, it is important to highlight to adaptors and innovators that a good blend of creative styles is needed to solve problems creatively (Ng, 2004). This is because the creative problem-solving process requires periods of divergent ideation/innovation alternating with convergent evaluation/adaptation, as well as the ability to judge when each approach is appropriate (Brophy, 1998; Runco, 1994).

Since creative styles are complementary, adaptors and innovators would do well to learn from one another. Adaptors can learn to set mastery goals like their innovative counterparts. This will ensure that they explore a variety of interesting alternatives in coming up with viable solutions. Similarly, innovators can learn to set performance goals like their adaptive counterparts. This will ensure that they stay focused on the task and keep the end goal in mind.

Finally, in developing a good blend of creative styles, both the adaptor and innovator should banish from their minds the egoistic thought: “My way is right/better, your way is wrong/inferior”. What's important is not the method *per se*, but whether it solves the problem at hand. As the late Chinese leader Deng Xiao Peng once said: “It doesn't matter whether the cat is black or white, so long as it catches the mice.” (Ng, in press).

The patterns of relationships between creativity, risk taking, personality and learning goals have major implications for nurturing creative and mastery-oriented learners who will not only enjoy learning for learning's sake but are intrinsically self-regulated and creative and who have extroverted and open-minded attitudes towards their learning. The classroom environment must ensure that the cultivation of an ego-approach or ego-avoidance orientation is not cultivated in our students as these students may also develop neurotic personality traits, risk avoidance and ego avoidance goal orientations which may not be conducive to their learning.

The findings of this research suggest that to nurture creative, compassionate, and vivacious learners who are infused with the joy of learning, educators should cultivate learning environments which facilitate task-involvement and inhibit ego-involvement in students. Some of the educational policies e.g. the national streaming examination at Primary Four and Six, as well as the national ranking of secondary schools contribute to an extremely stressful

learning environment in which incessant pressure is applied in a top-down fashion: principals are pressurized by the competitive system of education to raise the performance standards of their school. They pressurize their teachers to deliver high grades in class. The teachers in turn pressurize their students to do well in tests and examinations. In this, they are joined by the students' parents, who push their children to work hard so that they will not end up in a slower stream or a lower-ranking school. Ryan and Guardia (1999), showed that such a focus on competitive evaluation would undermine the intrinsic value attributed to learning, decrease interest in the topic being studied, as well as result in lower quality learning and creativity.

Another experimental study by Reeve and Deci (1996) which explored the possibility that winning a competition could be experienced either as controlling (if the interpersonal context emphasised the importance of beating one's opponent), or as informational (if the interpersonal context did not pressure one to win). They found, as predicted, that both groups of winners - those in the non-pressured context and those pressured to win - felt highly competent, relative to the losers. However, compared to the non-pressured winners, the pressured winners showed a marked reduction in perceived self-determination, which, in turn, undermined their intrinsic motivation in the task. In their discussion, Reeve and Deci (1996) noted that "winning a competition may not undermine intrinsic motivation if the interpersonal context does not add undue pressure to win. Unfortunately, it seems that the unyielding focus of our society on winning – whether in athletic competition or school performance, for example – may be creating a pressuring context that can have quite negative effects on individuals' experience and motivation" (p. 32).

Thus, teachers who attempt to inculcate creativity in their students should bear in mind that it is a qualitative construct – each creative style has its own strengths and weaknesses. As adaptors and innovators subscribe to different values, teachers may need to develop a good blend of creative styles in the classroom.

Conclusion

It would be ideal if every educator is committed to the mission of nurturing creative, compassionate, and vivacious

learners who are infused with the joy of learning, rather than competitive, conforming, and wary learners who are emotionally numbed by their fear of learning. We would also do well to remember the words of Albert Einstein, the creator par excellence who has experienced the deleterious effects of a competitive system of education which pressurize the student to do well. In his autobiography, Einstein wrote: "It is in fact nothing short of a miracle that the modern methods of instruction have not yet entirely strangled the holy curiosity of inquiry, for this delicate little plant, aside from stimulation, stands mainly in need of freedom. Without this it goes to wreck and ruin without fail" (Ng, 2001b, p. 97). To conclude, our task as educators is to close the discernible gap which presently exists between our espoused theory (what we say we will do) and our theory-in-use (what we actually do). This can only occur when we master the will to *free* our students to be creative.

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