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### Abstract

This study aims to analysis the relationship between generativity and contribution services. Erikson (1997) pointed out in his Psychosocial Developmental Theory that if an individual was lack of active participation while progressing from stage 7 to stage 8, the individual will tend to be in despair, getting pessimistic. This will eventually cause the individual fail to achieve self-identity. Moreover, Schoklitsch and Baumann (2011) emphasized that generativity is an essential factor to maintain psychological health in old ages. This theory had been approved by Baltes and Baltes (1990) that they regarded generativity and wisdom as the best portrayal of the old age life. It can be seen that generativity is indeed an important study issue in the field of gerontology. In addition, older adults have contributive needs, according to McClusky's (1971) Margin Theory of Needs. Older adults wanted to give a helping hand to the society. They hoped that both their contribution and themselves will be valued and appreciated. Through their devotion, they wished they could change public's stereotype of older adults. To be concrete, the purpose of this study is as follows: to understand the relationship between generativity and the contribution of services; to analyze the characteristics, actions and influential factors of generativity; to explore motivations behind, effectiveness of, and influences on the contribution of services. In order to achieve above purposes, this study adopted questionnaire survey method.

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# Generativity and the contribution of services among older adults in Taiwan

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## Abstract

*This study aims to analysis the relationship between generativity and contribution services. Erikson (1997) pointed out in his Psychosocial Developmental Theory that if an individual was lack of active participation while progressing from stage 7 to stage 8, the individual will tend to be in despair, getting pessimistic. This will eventually cause the individual fail to achieve self-identity. Moreover, Schoklitsch and Baumann (2011) emphasized that generativity is an essential factor to maintain psychological health in old ages. This theory had been approved by Baltes and Baltes (1990) that they regarded generativity and wisdom as the best portrayal of the old age life. It can be seen that generativity is indeed an important study issue in the field of gerontology. In addition, older adults have contributive needs, according to McClusky's (1971) Margin Theory of Needs. Older adults wanted to give a helping hand to the society. They hoped that both their contribution and themselves will be valued and appreciated. Through their devotion, they wished they could change public's stereotype of older adults. To be concrete, the purpose of this study is as follows: to understand the relationship between generativity and the contribution of services; to analyze the characteristics, actions and influential factors of generativity; to explore motivations behind, effectiveness of, and influences on the contribution of services. In order to achieve above purposes, this study adopted questionnaire survey method.*

**Keywords:** contribution of services, generativity, older adults

## INTRODUCTION

### Research Background and Purpose

As of February 2020, Taiwan had 3,644,513 people over 65, or 15.44% of the total population (Ministry of the Interior, 2020). The United Nations Educational, Scientific and Cultural Organization (UNESCO) considers education for older adults to play a crucial role in societies with ageing populations. It stresses that educators of older adults should stop viewing their problems in terms of welfare services, but embrace lifelong learning as a normal part of old age (Lamdin & Fugate, 1997). It is urgent for counties with ageing populations to explore how education and related services can help older adults with development tasks, and realize the significance and value of old age. As the population ages and lifespans extend, generativity will play a pivotal role in the lives of older adults (Ehlman & Ligon, 2012). Villar (2012) agrees that generativity plays a very important role in older adult education, since learning helps prepare older adults for their new roles.

In his theory of psychosocial development, Erikson (1997) regards life as a continuous process of personality development, which he divides into eight stages. Stage seven is concerned with generativity vs. stagnation. An individual progressing from stage seven to stage eight who lacks the quality of active participation will tend to experience despair and pessimism, and ultimately fail to achieve self-actualization. Schoklitsch and Baumann (2011) see generativity as essential to maintaining psychological health in old age. This theory is endorsed by

Baltes and Baltes (1990), who regard generativity and wisdom as the keys to successful ageing. Much research underscores the positive correlation between generativity and the well-being of old adults (Ackerman, Zuroff & Moscovitz, 2000; Keyes & Ryff, 1998). From this it can be seen that generativity is indeed an important issue in the field of gerontology. Countries around the world have been focusing on how to ensure that older adults not only live longer, but also live better. In Taiwan, however, most recent research has focused on active aging, successful aging, and productive aging, and not yet addressed the core issue of generativity.

Older adults also have contributive needs, according to McClusky's (1971) Margin Theory of Needs. Older adults want to help society. They hope that they and their contributions will be valued and appreciated, and that society will change its stereotype of older adults. The purpose of this study is as follows:

- (1) To understand the relationship between generativity and the contribution of services.
- (2) To analyze the characteristics, actions and influential factors of generativity.
- (3) To explore motivations behind, effectiveness of, and influences on the contribution of services.

### **A Theory of Generativity**

McAdams and de St. Aubin (1992) define generativity as the concern of adults for the happiness of the next generation. This perspective is based on a proactive coping perspective. As part of the aging process, adults wish to mentor and to pass on tradition to the next generation. Villar and Celdran (2012) point out that generativity implies a commitment to maintaining and improving the social environment in which individuals participate, in the hope of maintaining their integrity. According to Erikson (1997), during middle age, if individuals are unable to demonstrate their generativity, they will feel their lives gradually lose meaning and become stagnant, which in turn hinders them from experiencing integrity in their old age.

In the literature, the relationship between generativity and older adults is mostly discussed in terms of altruism, self-transcendence, and interpersonal respect. The relationship between generativity and altruism has mostly been linked to volunteer work. Older adults, we are told, feel a need to support their community and future generations (Theurer & Wister, 2010). In addition, volunteering has positive effects on the well-being and successful aging of older adults (Yuen, Huang, Bruik & Smith, 2008; Lin, 2006; Chen, 2011). Generativity is also said to promote self-transcendence, in the sense of expanding beyond previous boundaries. According to Cheng's (2009) research on the issue of generativity and interpersonal respect, valuing the contributions of older adults to their offspring will encourage them to continue this behavior. Respect from younger generations is especially helpful in encouraging older adults to display generativity, and to derive a sense of well-being from this.

In summary, this study considers that generativity represents the inner desire of an individual to assist others or to contribute to the society. As a concern of adults for their next generation, generativity motivates adults to help their descendants improve their well-being. In the progress of aging, adults hope they can continue nurturing, guiding and mentoring their offspring, and pass on their experience and wisdom to the next generation, thus leaving a lasting legacy to their posterity. Generativity is therefore an important aspect of successful aging and self-fulfillment.

## **RESEARCH DESIGN AND IMPLEMENTATION**

### **Research Instrument**

This study adopted the conceptual framework of generativity proposed by McAdams and de St. Aubin (1992) as the basis for the development of the scale used in the questionnaire on generativity and the contribution of services among older adults, including demographic variables, a generativity scale, and a contribution of services scale. Demographic variables included gender, age, education level, marital status,

health status, economic status, years of learning, attitude towards learning, years of contribution, and contribution attitude. The generativity scale included characteristic, action, and the contribution of services scale, including motivation and effectiveness.

The generativity characteristic included three domains: values, self-efficacy, and personality traits. The Cronbach's  $\alpha$  coefficient was 0.942, 74.32% of explained validity for the whole scale in terms of generativity characteristic. The generativity action including three domains: passing on experiences, creating values, and helping others. The Cronbach's  $\alpha$  coefficient was 0.878, 61.17% of explained validity for the whole scale in terms of generativity action.

“Contribution of services: motivation” included two domains: intrinsic motivation and extrinsic motivation. The Cronbach's  $\alpha$  coefficient was 0.915, 56.36% of explained validity for the whole scale in terms of contribution of services motivation. “Contribution of services: effectiveness” included four domains: gaining from service, self-identification, self-integrity, and contributing to society. The Cronbach's  $\alpha$  coefficient was 0.960, 79.67% of explained validity for the whole scale in terms of the effectiveness of contribution of services.

To sum up, these scales possess good internal consistency, reliability and validity, and these rating scales make them suitable for related research. Table 1 illustrates the domains, reliability and validity of this research instrument.

Table 1 The domains, reliability and validity of research instrument

Scale	Sub-scale	Domains	Reliability Cronbach's $\alpha$	Explained Validity
Generativity scale	Generativity characteristic	values, self-efficacy, personality traits	0.942	74.32%
	Generativity action	passing on experiences, creating values, helping others	0.878	61.17%
Contribution service scale	Contribution of services: motivation	intrinsic motivation, extrinsic motivation	0.915	56.36%
	Contribution of services: effectiveness	gaining from services, self-identification, self-integrity, contributing to society	0.960	79.67%

**Subjects**

Taiwan has three types of older-adult educational institutions: Evergreen Academy (hereafter EA), organized by the Department of Social Welfare; the Senior Learning Center (hereafter SLC); and the Senior Learning Academy (hereafter SLA), organized by the Ministry of Education (Lin, 2008). According to Lin (2015), different social outcomes are generated by different types of courses at these various institutions.

SLC was established in order to (1) provide senior citizens with learning opportunities and enable them to build a healthy body and mind; (2) develop older adult education at the community level; and (3) consolidate community resources and generate a community-based learning culture. At SLC, “contribution of services” courses are associated with better social outcomes (Lin, 2015). According to McClusky (1971),

humans have a need to contribute. “Contribution of services” courses provide older adults with opportunities to participate in volunteer services, and thereby enhance their self-esteem and sense of self-worth. Since they are able to contribute to society, greater social outcomes are generated.

The data in this study was collected from participants in SLC. 170 pre-test questionnaires were sent out, and 143 valid questionnaires were collected. As for formal testing, the researcher examined 221 SLCs that had been established for at least five years (as of 2018). 10 questionnaires were issued to each center. A total of 2,210 copies were issued, and 1,840 copies were collected. After eliminating questionnaires with too many omissions and over-concentrated answers, the number of valid questionnaires was 1,551, for an effective questionnaire recovery rate of 70.2%.

## Data Analysis

### 2.3.1 One-way analysis of variance (one-way ANOVA)

This analyzed subjects with a different number of years of learning, different attitudes towards learning, a different number of years of contribution, and different attitudes toward contribution, to see whether there were significant differences in generativity and contribution of services. If a significant difference was identified, a Scheffe post hoc test was also conducted.

### 2.3.2 Univariate analysis

This assessed the strength of association between demographic variables and generativity on one hand, and contribution of services on the other, in order to calculate the extent to which years of learning, attitudes toward learning, years of contribution, and attitude toward contribution affected the generativity and contribution of services.

### 2.3.3 Stepwise regression analysis

Stepwise regression analysis was used to predict contribution of service effectiveness from generativity characteristics and actions.

## RESULTS

### 3.1 The main factors affecting generativity and the contribution of services were the subject's attitude toward the contribution of services and towards learning

Conducting univariate analysis based on generativity characteristics as dependent variables, the researcher found that attitude towards learning ( $\omega^2 = .146$ ) and attitude towards the contribution of services ( $\omega^2 = .237$ ) were highly correlated with the following characteristics: education level ( $\omega^2 = .015$ ), health status ( $\omega^2 = .050$ ), and years of learning ( $\omega^2 = .009$ ). Years of contribution ( $\omega^2 = .026$ ) was modestly correlated to the characteristics. The analysis indicated that the main factors affecting generativity characteristics were the subjects' attitude towards learning and contribution of services.

Conducting univariate analysis based on generativity actions as dependent variable, the researcher found that the contribution services attitude ( $\omega^2 = .179$ ) was highly correlated with actions; attitude towards learning ( $\omega^2 = .101$ ) reached moderate correlation; and the gender ( $\omega^2 = .008$ ), economic status ( $\omega^2 = .005$ ), health status ( $\omega^2 = .026$ ), years of contribution ( $\omega^2 = .020$ ) reached a low correlation. This indicates that the main factors affecting generativity actions were subjects' attitude towards contribution of services, followed by their attitude towards learning.

Conducting univariate analysis based on motivations for the contribution of services as a dependent variable, the researcher found that attitude toward contribution of services ( $\omega^2 = .133$ ) was moderately related to the motivations, while economic status ( $\omega^2 = .003$ ), health status ( $\omega^2 = .011$ ), attitude towards

learning ( $\omega^2 = .057$ ) reached a low correlation. This indicates that the main factor affecting the motivation for the contribution of services was the subjects' attitude towards the contribution of services.

Conducting univariate analysis based on the effectiveness of the contribution of services as a dependent variable, the researcher found that attitude towards the contribution of services ( $\omega^2 = .168$ ) was highly correlated with effectiveness. Attitude towards learning ( $\omega^2 = .101$ ) reached a moderate correlation, while gender ( $\omega^2 = .002$ ), economic situation ( $\omega^2 = .006$ ), health status ( $\omega^2 = .018$ ), years of learning ( $\omega^2 = .005$ ), and years of contribution ( $\omega^2 = .019$ ) had low correlation. This indicates that the main factors affecting the effectiveness of the contribution of services were the subjects' attitude towards the contribution of services, followed by their attitude towards learning.

In summary, through univariate analysis, it was found that the main factors affecting generativity and the contribution of services were the attitude of older adults towards contribution services or learning, while gender, age, education level, marital status, health status, and economic status had only slight impact.

### **3.2 The more years of learning, and the more active their attitude towards learning, the better the subjects performed in generativity and contribution of services**

The number of years of learning led to significant differences in the overall domains of generativity characteristics ( $F=4.61$ ,  $p<.01$ ). Through a Post-hoc Scheffe test, the researcher found that those who had 7 (inclusive) or more years of learning ranked higher than those who had less than one year, indicating that the more years of learning, the higher the generativity characteristics. Although years of learning did not reach significance in the overall actions, there was a significant difference in the domain of creating values ( $F=3.89$ ,  $p <.01$ ). This indicates that the actions of creating values will be affected by the number of years of learning. Through a Post-hoc Scheffe test, it was found that those who had 5 or more years of learning ranked higher than those who had less than one year.

Attitude towards learning led to significant differences in the overall domains of generativity characteristics ( $F=88.32$ ,  $p<.001$ ). Through a post-hoc Scheffe test, the researcher found that the more active the subjects' attitude towards learning, the more they were able to express the generativity characteristics. Attitude towards learning led to significant differences in the overall domain of generativity actions ( $F=58.56$ ,  $p<.001$ ), and through post-hoc Scheffe test, it was found that those who were more devoted to learning showed more generativity actions.

Attitude towards learning led to significant differences in the overall domains of contribution services motivations ( $F=32.31$ ,  $p<.001$ ). Through a post-hoc Scheffe test, the researcher found that the more active the subjects' attitude towards learning, the stronger the motivations of contribution services. Attitude towards learning had significant differences in the overall domain of contribution services effectiveness ( $F=58.87$ ,  $p<.001$ ), and through a post-hoc Scheffe test, it was found that those who were more devoted to learning were more effective in the contribution of services.

In summary, through one-way ANOVA, it was found that the subjects who had more years of learning and a more active attitude, had higher generativity characteristics and were more devoted to generativity actions. The stronger the motivations for the contribution of services, the more effective the contribution of services will be.

### **3.3 Subjects with more years of contribution, and who more devoted to the contribution of services, had higher performance of generativity and contribution of services**

Years of contributing services reached significance in the overall domains of generativity actions ( $F=6.79$ ,  $p<.001$ ). Through a post-hoc Scheffe test, the researcher found that subjects with more years of contribution of services were able to devote more to generativity actions.

Years of contribution services led to significant differences in the overall domain of the effectiveness of contribution services ( $F=6.60$ ,  $p<.001$ ). Through a post-hoc Scheffe test, the researcher found that the contribution of services provided by subjects with over 3 years of the contribution of services was more effective, and it took more than 7 years to achieve self-identification.

Attitude towards the contribution of services led to significant differences in the overall domains of generativity characteristics ( $F=91.40$ ,  $p<.001$ ). Through a post-hoc Scheffe test, the researcher found that subjects whose attitudes were more committed to the contribution of services performed better in terms of generativity characteristics. Attitude towards the contribution of services led to significant differences in the overall domain of generativity actions ( $F=64.69$ ,  $p<.001$ ). Through a post-hoc Scheffe test, the researcher found that the subjects devoted more to the contribution of services demonstrated more generativity actions.

Attitude towards the contribution of services led to significant differences in the overall domain of motivation for the contribution of services ( $F=45.49$ ,  $p<.001$ ). Through a post-hoc Scheffe test, the researcher found that the more devoted the subjects were to the contribution of services, the stronger their motivation for the contribution of services was. Attitude towards the contribution of services led to significant differences in the overall domains of contribution services effectiveness ( $F=59.75$ ,  $p<.001$ ). Through a post-hoc Scheffe test, the researcher found that those who were more committed to the contribution of services attitude were more effective in the contribution of services.

In summary, through one-way ANOVA, it was found that the subjects who had more years of the contribution of services, and were more devoted to the contribution of services, had higher generativity characteristics, and were able to devote more to generativity actions. The stronger the motivations for contributing services, the more effective the contribution of services will be.

### **3.4 Self-efficacy was the main predictor of the motivation for the contribution of services**

The researcher used the three domains of generativity characteristics as independent variables, and the motivations for the contribution of services as dependent variables, in a stepwise regression analysis. According to the results, the order of the significance predictability in the domain of the motivation for the contribution of services was self-efficacy, values, and personality traits. The model could explain 39.3% of the variance of the motivation for the contribution of services,  $R^2=.393$ ,  $F=335.659$  ( $p<.001$ ). Furthermore, stepwise regression analysis shows that self-efficacy could explain 32.7% of the motivation for the contribution of services, while values could explain 6.4%, and personality traits could explain 0.2%. That is to say, older adults who have higher self-efficacy, are more likely to have stronger motivations for the contribution of services.

### **3.5 Values and passing on experience were the main predictors of the effectiveness of the contribution of services**

The researcher used the three domains of generativity characteristics as independent variables, and the effectiveness of the contribution of services as dependent variables, in stepwise regression analysis. According to the results, the order of the significance predictability in the domain of the effectiveness of the contribution of services was values, self-efficacy, and personality traits. The model could explain 42.4% of the variance of the motivation for the contribution of services,  $R^2=.424$ ,  $F=381.088$  ( $p<.001$ ). Furthermore, stepwise regression analysis shows that values could explain 39.3% of the effectiveness of the contribution of services, while self-efficacy could explain 2.6%, and personality traits could explain 0.6%. That is to say, older adults who have more positive values, are more likely to have a more effective contribution of services.

In addition, the researcher used the three domains of generativity actions as independent variables, and the effectiveness of the contribution of services as dependent variables, in a stepwise regression analysis. According to the results, the order of the significance predictability in the domain of the effectiveness of the contribution of services was passing on experience, creating values, and helping others. The model could explain 42.5% of the variance of the motivation for the contribution of services,  $R^2=.425$ ,  $F=574.592$  ( $p<.001$ ). Furthermore, stepwise regression analysis shows that passing on experiences could explain 38.2% of the effectiveness of the contribution of services, while creating values could explain 4.2%, and helping others could explain 0.1%. That is to say, older adults whose main actions were passing on experience, have more effective contribution of services.

## DISCUSSION

The effectiveness of the contribution of services will be influenced by the characteristics and actions of generativity. Characteristics are mainly influenced by values. Actions are mainly influenced by passing on experience. To wit:

First, generativity has a positive impact on older adults, who can demonstrate their generativity through participating in the contribution of services, and then by developing themselves in their old age. Erikson (1997) mentions that older adults can experience great generativity by fulfilling various social roles, and by devoting themselves enthusiastically to their later life; and the findings of this study echo this. Jones and McAdams (2013) point out that individuals with high generativity often have higher social participation, leadership, and creativity. These capabilities help older adults commit to different stages of their later life. Additionally, individuals with high generativity have higher social support, greater happiness, and a greater sense of satisfaction in life. That improving generativity will lead to positive outcomes for individuals is also echoed by this study.

Secondly, the main factors affecting generativity and the contribution of services are attitude towards the contribution of service and learning, while gender, age, education level, marital status, health status, economic status had only slight effects. Jones and McAdams (2013) mentioned that studies of different fields are still exploring the relationship between demographic variables (such as gender, economic status, and education level) and generativity. Keyes and Ryff (1998) found that women may be more likely than men to develop generativity because of the impact of their growth. However, studies have shown that men and women may demonstrate generativity in different forms. Therefore, impacts related to gender have yet to be confirmed (Steward & Ostrove 1998; Zucker, Ostrove, & Stewart, 2002). Older adults with higher economic status usually have more spare resources to devote to altruistic behavior, thus showing more generativity (Segal, DeMeis, Wood, & Smith, 2001). In addition, many studies have shown that those with higher education levels generally have more generativity, as do those willing to participate in volunteering services (Keyes & Ryff, 1998; Tang, 2008). However, Jones and McAdams (2013) point out that although demographic variables may affect generativity, they are not the main factors. Active socialization is the important factor in predicting generativity. This is in line with the present study, which finds that generativity is mainly affected by the attitude towards contribution of services and learning.

More specifically, this study finds that older adults participating in generativity activities can not only expand their later life, but also construct a stage for social participation. As McAdams and de St. Aubin (1992) put it, generativity provides a more balanced concept for the individual and society, emphasizing positive interaction and reinforcing a two-way cycle between personal growth and the process of social development.



## CONCLUSIONS

### **5.1 The major factors influencing generativity and contribution of services was the individual's attitude**

The researcher conducted univariate analysis of generativity and contribution of services based on variations like gender, age, education level, marital status, economic status, health status, years of learning, attitude towards learning, years of contribution, and attitude towards contribution of services. The main factors that influenced generativity and contribution of services were discovered to be the subject's attitude towards contribution of services and attitude towards learning.

### **5.2 The more years of learning and years of contributions, and the more committed the attitude, the greater the performance of generativity and contribution of services**

Individuals who devoted more years of participation in learning and contribution services, engaged in more generativity behavior of creating values. More years of contribution of services meant more generativity behavior of passing on experiences. In addition, those who were more committed to learning and contribution of service, had stronger motivation to contribute services, and to provide better contribution services.

### **5.3 Values are the main factors affecting generativity behavior and the effectiveness of contribution of services**

Individuals with more positive values were more devoted to generativity behavior, especially in the area of passing on experiences. Individuals with higher self-efficacy were more likely to create values and help others. In addition, positive values not only strengthen self-identification, but also enhance the feeling of gaining from service, and contributing to society through self-actualization.

### **5.4 The higher the self-confidence of older adults, the stronger their motivation**

The contribution of services motivation is most affected by self-confidence. The more that older adults believe they can use their abilities to achieve certain things, the stronger their motivations to contribute services will be. Through the social participation process associated with contribution of services, the goal of a more active old age can be attained.

### **5.5 Taking action by passing on experiences can produce higher effectiveness of contribution of services**

The effectiveness of contribution of services is mainly influenced by passing on experiences. Among all generativity behavior, the act of passing on experiences to the next generation has the most effect on contribution of services, especially when it is conducted spontaneously by older adults through their self-motivation.

## 6. Acknowledgement

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