



# Journal of Applied Sciences

ISSN 1812-5654

**science**  
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## Parent-child Shared Reading Meets Information Technology: Revealing Links Between Parenting and Children's Character Development

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**Abstract:** The influence of integrated information technology on various facets of modern day life is immense. Over the past decade, it has also influenced early childhood education-be it from an academic perspective or be it from the perspective of character education. The study aims to investigate how integrated information technology with parent-child shared reading would have a major impact on family education, especially from parenting and character education perspectives. The study first collects the data from some relative questionnaires with randomly sampling to distribute for 500 preschool children's parents in Southern Taiwan. The data are then analyzed by using SPSS statistical tool with factor analysis, regression analysis and also Hierarchical regression. The results of analysis are concluded as follows: (1) Parenting style reveals partially notably positive correlations with young children's character development, (2) Parent-child shared reading within information technology application presents partially significantly positive correlations with parenting style, (3) Parent-child shared reading within information technology application appears partially remarkably positive correlations with young children's character development, (4) Parent-child shared reading within information technology application shows partially significantly moderating effects between parenting style and children's character development. Based on the research outcomes, it is expected that some suggestions and references would be very useful for preschool children's parents to appropriately integrate information technology within their shared reading and parenting with children.

**Key words:** Information technology, parent-child shared reading, parenting style, character development

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### INTRODUCTION

It is often said that children of today belong to the 'Technology Generation' (Jukes and Dosaj, 2006; Robinson and Stubberud, 2012). Information technology becomes a part of their life even when they are very young and has a deep influence during the growth years (Chou, 2012b; Wood, 2005; Yeh *et al.*, 2011; Yu, 2009). Over the past decade, the use of integrated information technology continues to increase in early childhood education. During the initial years, both parents as well as teachers were concerned whether using instruments of integrated information technology would be beneficial or harmful to the children (Prensky, 2001a, b; Su, 2010). However, the advantages offered by information technology in education are immense and cannot be ignored. Traditionally, using information technology

meant just the use of computers. However, with further advancement in technology, the use of Internet, mobile applications and other associated technology products has enhanced the scope of learning drastically (Hartle, 2006; Wan *et al.*, 2012). In doing so, the study looks at how the parent-child shared reading of integrated information technology co-related with parenting styles and young children's character development.

### LITERATURE REVIEW

**Integrated information technology and early childhood education:** With advancements in information technology, various instruments are used to aid learning in children, even those who are in preschool and kindergarten stages (Ale and Chib, 2011; Donald *et al.*, 2012; Albion and Ertmer, 2002; Chou, 2012a; Ou, 2009). Modern day

classrooms for early children are equipped with devices such as computers, cameras, multimedia equipment, voice recorders, Internet connection and so on. All these instruments are also integrated with each other to form one cohesive medium of integrated information technology (Chiu and Chun, 2004; Liao, 2010; Lingo *et al.*, 2011; Peggy, 2005; Tien and Hung, 2011). While there was considerable skepticism on whether integrated information technology should be used for family and for early childhood education (Cesarone, 2003; Clements and Sarama, 2003; Chiu, 2006, 2008), over the past few years, integrated information technology has become an integral part of early childhood education. One reason as to why early childhood education is effective through information technology is that the human brain is able to relate more to the visual images, videos and empathy tools facilitate the learning in concrete manner (Gimbert and Cristol, 2004; Prokopiadou, 2012; Lee, 2009). For young children, the tools that are used are 'hands-on' that they give control to the children. The use of these tools not only strengthens the learning process but also increase the motivation level (Chang, 2004, 2010; Helene and Paula, 2009; Wang, 2009). In this study, the parent-child reading program within information technology application are adopted from Chang (2010) study on the effect of parent-child reading program group on healthy family, parent-child relationship and character development.

**Integrated information technology and parenting style:** In accordance with Baumrind (1991), there are four parenting styles, including authoritarian, authoritative, permissive and uninvolved. The authoritarian parent doesn't allow children have much freedom to develop their choices (Timpano *et al.*, 2010). Authoritative parenting is also known as balanced parenting and shows the right balance between displaying authority and showing responsiveness to the children (New and Cochran, 2007). The authoritative parent gives encouragement and thorough reasoning behind any rules that are set and other preferred methods of discipline that are implemented. This helps the child to understand that they are loved, but they must be punished if they violate these rules. The permissive parent doesn't impart a sense of discipline on a child, but rather places emphasis on allowing the child to do whatever he wants, regardless of the consequences. The neglectful or uninvolved parent simply fulfills a child's physical needs and is completely removed from any emotional or disciplinary guidance. (New and Cochran, 2007). Since, this parenting style generally has the most negative effect on children because they don't receive the attention that they need to

develop into a well-rounded adult, the neglectful parenting style are not included in this study. More and more parents are technology savvy these days and are using various information technology tools to help them with parenting (Shin *et al.*, 2012). This section looks at how integrated information technology relates to parenting style. One positive implication of using integrated information technology with parenting is that there are a number of tools that can help them adopt the right style of parenting (Eastin *et al.*, 2006). However, the new age applications are such that they can help the parents understand the style of parenting and provide them with regular tips (Eastin *et al.*, 2006; Olney *et al.*, 2008). For instance, parents can record the regular behavior with children, including the application providing them with the inputs on to improve the relationship (Fisch *et al.*, 2002).

Integrated information technology can be a good means to help the parents adopt the authoritarian style of parenting, which is the most favorable style of parenting (Grossbart *et al.*, 2002). Also, with authoritative style, parents may be able to explain the appropriate usage of information technology to the children so that they do not misuse it in the future (Livingstone, 2007). The research conducted by Barkin *et al.* (2006) tries to understand the co-relation on how the use of various technologies can influence the parenting styles that is chosen by the parents. If the parents are not aware of these trends, then it is likely that they may not be able to communicate well on certain aspects, leading to a generation gap. This is particularly true in negligent style of parenting because the parents may not take the efforts to see how the children behave in the cyberspace (Barkin *et al.*, 2006). Numerous studies have been conducted on the psychological impact of parenting styles of children and it has been noticed that using an authoritative style of parenting, which is both demanding as well as responsive has a positive impact on the well-being of the children (Cheung and McBride-Chang, 2008).

**Parenting style and character education:** In simple terms, character education can be described as the teachings provided to children so that they go on to develop certain positive character traits which are socially acceptable and appreciated (such as understanding their moral and civic duties and good mannerisms) (Damon, 2002; Tyra, 2011; O'Neil, 2010; O'Sullivan, 2004). Character education at an early age is very important because it influences the way in which the personality of the individual develops in the later years. During the early childhood, parents are the people who have the closest interaction with the children. Therefore, the style of parenting that the parents adopt

does have an impact on how the character education takes place (Wilhelm *et al.*, 2005). In accordance with character education quality standards: A self-assessment tool for schools and districts (CEP, 2008), three items are selected for the study in assessing young children's character development. Self-reflection: The capacity of humans to exercise introspection and the willingness to learn more about their fundamental nature, purpose and essence. Empathy: Identification with and understanding of another's situation, feelings and motives. Respect: It gives a positive feeling of esteem or deference for a person or other entity (such as a nation or a religion) and also specific actions and conduct representative of that esteem.

Golding (2004) conducted a research on parents and suggested that authoritative style of parenting is effective because children understand the importance of having good morals and values, developing ethical habits and being well-mannered, because it is explained to them in an appropriate manner, especially for emotional expression (Richardson *et al.*, 2009; Lowe, 2009). Furthermore, with authoritative style of parenting, children get an opportunity to take their own decisions based on reasoning which helps in character education and they know to distinguish between right and wrong. It is noticed that the parents who follow the authoritative style of parenting also show qualities such as appropriate reasoning and good decision making in their lives and they also become good role models for their children (Golding, 2004). Both indulgent parenting and authoritarian parenting are not able to facilitate appropriate character education in children (Kawamura *et al.*, 2002). With authoritarian parenting, children may listen to their parents about aspects such as morality and ethics, but may not understand it because the reasoning is not explained to them. Such children develop certain traits which display a clear lack of character education (Kawamura *et al.*, 2002; Senechal, 2006; Tomopoulos *et al.*, 2006, 2007). Therefore, it can be said that authoritarian parenting is not very conducive for character education as it does not help in complete character education.

With indulgent parenting, parents do not try hard to inculcate character education if the child is resistant and hence, fail in providing character education (Kawamura *et al.*, 2002). The style of parenting which is least conducive for character development is Neglectful parenting (Casper and Theilheimer, 2009). The above section shows how parenting style relates with character education. Therefore, it is necessary to understand that while technology can be a facilitator to enhance the relationship between parents and children, it can never be a substitute. It is important to make sure that there is a

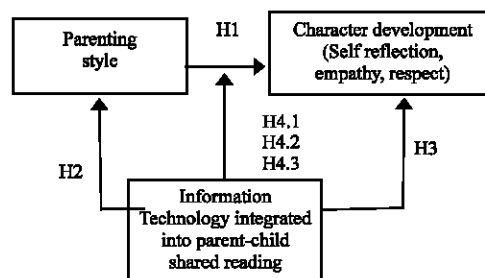
right balance in the way in which technology is used or, instead of benefiting the relationship can have a negative impact on it. It can be concluded that integrated information technology has an impact on the parent-children relationship.

According to the research purpose and literature review, the theoretical structure for the information technology integrated into parent-child reading program, parenting style and character development was referred to verify the following hypotheses:

- **H1:** Parenting style is positively related to preschool children's Character Development
- **H2:** Information technology integrated into parent-child shared reading appears positively related to Parenting style
- **H3:** Information technology integrated into parent-child shared reading reveals positively related to preschool children's character development
- **H4.1:** Information technology integrated into parent-child shared reading shows significant moderating effects between parenting style and self-reflection
- **H4.2:** Information technology integrated into parent-child shared reading shows significant moderating effects between parenting style and empathy
- **H4.3:** Information technology integrated into parent-child shared reading shows significant moderating effects between parenting style and respect

## RESEARCH METHOD

### Research framework:



**Research samples:** With random sampling to distribute and collect questionnaires on-site, parents from Southern Taiwan preschools were selected as the research subjects. Within the total 500 questionnaires, total 396 valid copies were retrieved.

**Measurement of variables:** Based on the variables in the research framework, questionnaire survey was preceded.

By referring to the scales developed in relevant research, the dimensions of parenting style, character education development and information technology integrated into family were applied to Likert's five-point scale for measurement: (1) Parenting style was referred to Baumrind (1991) and Barkin *et al.* (2006), including authoritarian, authoritative and permissive, (2) Character education development was referred from character education quality standards, three items are selected as self-reflection, empathy and respect, (3) Information technology integrated into parent-child shared reading was referred from Chang (2010), covering active instruction, natural assistance and free interaction.

**RESULTS**

**Analyses of reliability and validity**

**Parenting style scale:** With factor analysis, authoritarian, (eigenvalue = 2.257,  $\alpha = 0.82$ ), authoritative (eigenvalue = 1.864,  $\alpha = 0.87$ ) and permissive (eigenvalue = 1.337,  $\alpha = 0.85$ ). The commonly accumulated variance explained achieved 73.184%.

**Character education development scale:** With factor analysis, self-reflection, (eigenvalue = 3.412,  $\alpha = 0.86$ ), empathy (eigenvalue = 2.823,  $\alpha = 0.81$ ) and respect (eigenvalue = 2.119,  $\alpha = 0.80$ ). The commonly accumulated variance explained reached 76.371%.

**Information technology integrated into family scale:** With factor analysis, active instruction (eigenvalue = 2.465,  $\alpha = 0.83$ ), natural assistance (eigenvalue = 2.172,  $\alpha = 0.89$ ) and free interaction (eigenvalue = 1.682,  $\alpha = 0.84$ ). The commonly accumulated variance explained was up to 79.513%.

**Regression between variables:** In terms of multiple regression analysis between parenting style and character development, in parenting style, authoritarian, authoritative and permissive were the independent variables, while self-reflection, empathy and respect in character development were the dependent variables.

After multiple regression analysis between parenting style and character development, Table 1, self-reflection, empathy and respect presented partially significant correlations with authoritarian, authoritative and permissive that H1 was partially agreed.

After multiple regression analysis between information technology and parenting style, Table 2, active instruction, natural assistance and free interaction appeared partially remarkably positive correlations with authoritarian, authoritative and permissive that H2 was partially agreed.

Table 1: Multiple regression analysis between parenting style and character development

Parenting style (Independent variable)	Character development (dependent variable)		
	Self-reflection	Empathy	Respect
Authoritarian	0.243**	0.181 *	0.169*
Authoritative	0.087	0.163	0.102
Permissive	0.156*	0.136*	0.147*
F	6.838	7.531	8.386
Significance	0.000***	0.000***	0.000***
R <sup>2</sup>	0.271	0.364	0.423
Regulated R <sup>2</sup>	0.023	0.038	0.046

\*p<0.05, \*\*p<0.01, \*\*\*p<0.001, Data source: Self-organized in this study

Table 2: Multiple regression analysis between information technology and parenting style

Information technology (independent variable)	Parenting style (dependent variable)		
	Authoritarian	Authoritative	Permissive
Active instruction	0.137*	0.043	0.182*
Natural assistance	0.183*	0.023	0.198*
Free interaction	0.214**	0.137	0.233**
F	8.015	5.322	9.165
Significance	0.000***	0.060	0.000***
R <sup>2</sup>	0.312	0.121	0.382
Regulated R <sup>2</sup>	0.032	0.011	0.068

\*p<0.05, \*\*p<0.01, \*\*\*p<0.001, Data source: Self-organized in this study

Table 3: Multiple regression analysis between information technology and character development

Information technology (independent variable)	Character development (dependent variable)		
	Self-reflection	Empathy	Respect
Active instruction	0.157*	0.136*	0.169*
Natural assistance	0.174*	0.163*	0.157
Free interaction	0.201**	0.278**	0.231**
F	9.126	11.275	13.462
Significance	0.000***	0.000***	0.000***
R <sup>2</sup>	0.211	0.327	0.391
Regulated R <sup>2</sup>	0.044	0.052	0.061

\*p<0.05, \*\*p<0.01, \*\*\*p<0.001, Data source: Self-organized in this study

Table 3 indicates that after multiple regression analysis between information technology and character development, Table 3 shows active instruction, natural assistance and free interaction showed partially notable correlations with self-reflection, empathy and respect that H3 was partially agreed.

**Hierarchical regression between variables:** With hierarchical regression analysis, the effects of the interactions between parenting style and information technology on character development were discussed.

**Moderating effects of parenting style and information technology on self-reflection in character development:** Having interactions between authoritarian, authoritative and permissive and active instruction, natural assistance, free interaction, the effects on self-reflection are shown in Table 4.

With the moderating effects between parenting style and information technology, authoritarian and active

Table 4: Moderating effects of parenting style and information technology on self-reflection in character development

Hierarchical variable	Hierarchical predictor	Hierarchy I	Hierarchy II	Hierarchy III
		β	β	β
Parenting style	Authoritarian	0.101	0.142*	0.155*
	Authoritative	0.067	0.166*	0.184*
	Permissive	0.213**	0.289**	0.237**
Information technology	Active instruction		0.124	0.122
	Natural assistance		0.177*	0.143
	Free interaction		0.131	0.117
Interaction	Authoritarian×Active instruction			0.028
	Authoritative×Active instruction			0.133
	Permissive×Active instruction			0.142
	Authoritarian×Natural assistance			0.167*
	Authoritative×Natural assistance			0.016
	Permissive×Natural assistance			0.173*
	Authoritarian×Free interaction			0.035
	Authoritative×Free interaction			0.189*
	Permissive×Free interaction			0.046
	Regression model	F	6.578	7.439
Significance		0.000***	0.000***	0.000***
R <sup>2</sup>		0.271	0.294	0.336
ΔR <sup>2</sup>		0.271	0.023	0.042

\*p<0.05, \*\*p<0.01, \*\*\*p<0.001, Data source: Self-organized in this study

Table 5: Moderating effects of parenting style and information technology on empathy in character development

Hierarchical variable	Hierarchical predictor	Hierarchy I	Hierarchy II	Hierarchy III
		β	β	β
Parenting style	Authoritarian	0.187*	0.179*	0.209**
	Authoritative	0.113	0.138	0.173*
	Permissive	0.166*	0.185*	0.208**
Information technology	Active instruction		0.162*	0.159*
	Natural assistance		0.138	0.116
	Free interaction		0.171*	0.175*
Interaction	Authoritarian×Active instruction			0.046
	Authoritative×Active instruction			0.179*
	Permissive×Active instruction			0.125
	Authoritarian×Natural assistance			0.163*
	Authoritative×Natural assistance			0.088
	Permissive×Natural assistance			0.121
	Authoritarian×Free interaction			0.049
	Authoritative×Free interaction			0.133
	Permissive×Free interaction			0.176*
	Regression model	F	7.631	8.753
Significance		0.000***	0.000***	0.000***
R <sup>2</sup>		0.364	0.396	0.447
ΔR <sup>2</sup>		0.364	0.032	0.051

\*p<0.05, \*\*p<0.01, \*\*\*p<0.001, Data source: Self-organized in this study

Table 6: Moderating effects of parenting style and information technology on respect in character development

Hierarchical variable	Hierarchical predictor	Hierarchy I	Hierarchy II	Hierarchy III
		β	β	β
Parenting style	Authoritarian	0.167*	0.188*	0.196**
	Authoritative	0.181*	0.167*	0.181*
	Permissive	0.206**	0.213***	0.253***
Information technology	Active instruction		0.114	0.146*
	Natural assistance		0.103	0.126
	Free interaction		0.161*	0.164*
Interaction	Authoritarian×Active instruction			0.156*
	Authoritative×Active instruction			0.132
	Permissive×Active instruction			0.059
	Authoritarian×Natural assistance			0.079
	Authoritative×Natural assistance			0.178*
	Permissive×Natural assistance			0.137
	Authoritarian×Free interaction			0.104
	Authoritative×Free interaction			0.106
	Permissive×Free interaction			0.208**
	Regression model	F	8.105	11.317
Significance		0.000***	0.000***	0.000***
R <sup>2</sup>		0.413	0.442	0.475
ΔR <sup>2</sup>		0.423	0.022	0.031

\*p<0.05, \*\*p<0.01, \*\*\*p<0.001, Data source: Self-organized in this study

instruction, authoritative and natural assistance and permissive and free interaction revealed notably positive effects on self-reflection. H4.1 therefore, was agreed.

**Moderating effects of parenting style and information technology on empathy in character development:**

In Table 5, with the moderating effects between parenting style and information technology, authoritarian and active instruction, authoritative and natural assistance and permissive and free interaction appeared notably positive effects on empathy. H4.2 therefore, was partially agreed.

**Moderating effects of parenting style and information technology on respect in character development:**

With the interactions between parenting style and information technology, the effects on respect in character development are listed in Table 6.

From Table 6, having the moderating effects between parenting style and information technology, authoritarian and active instruction, authoritative and natural assistance and permissive and free interaction revealed significantly positive effects on respect. H4.3 therefore, was partially agreed.

## CONCLUSION

Tools of integrated information technology have been integrated as an integral part of parenting and preschool children's character development within family education, in both direct and indirect manners. While most of these tools prove to be an aid in assisting the parents with numerous aspects of parenting such as education, building quality parent-child relationships and influencing preschool children's character education development, overuse of these tools may hamper the situation. Additionally, not using integrated information technology in parenting is also not a good practice as information technology has been unconsciously integrated into preschool children's learning environment. Hence, the most important aspect is to strike the right balance in the way in which these tools are used by parents, teachers and preschool children. Also, parents should remember that using integrated information technology for parenting does not become a substitute for the actual parenting process, which also needs to be carried out simultaneously, in the child-centered manner. At present, the use of technology for early childhood education in Taiwan is still in nascent stages and hence, there are not many specific researches that show statistical data. In addition, integrated information technology also relates to the way in which preschool children's character development shapes up and the relationship between parents and children. Both technical quality as well as the features of the technology should be well-defined so that it does not cause any frustration to the children. However, within the next few years, as integrated information technology would be used more rapidly, more statistical data would be available around it. However, given the benefits it offers, integrated information technology relates significantly to early childhood education.

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