The influence of children's socialisation on shopping behaviour in the context of a computer-based shopping simulation

Theresia Mennekes
University of Siegen
Maria Bergmann
University of Siegen
Hanna Schramm-Klein
University of Siegen
Michael Schuhen
University Siegen
Gunnar Mau
DHGS German University of Health and Sports
Philine Drake
German Institution of Educational Research
Johannes Hartig
German Institution of Educational Research
Manuel Froitzheim
University of Siegen

Cite as:
Mennekes Theresia, Bergmann Maria, Schramm-Klein Hanna, Schuhen Michael, Mau Gunnar, Drake Philine, Hartig Johannes, Froitzheim Manuel (2022), The influence of children's socialisation on shopping behaviour in the context of a computer-based shopping simulation. *Proceedings of the European Marketing Academy*, 51st, (107672)

Paper from the 51st Annual EMAC Conference, Budapest, May 24-27, 2022

The influence of children's socialisation on shopping behaviour in the context of a computer-based shopping simulation

Abstract

Even at a young age, children influence or make purchasing decisions. For this reason, companies view them as consumers and target them specifically. Until now there is just a little research on how children are able to make competent purchase decisions. Their shopping behaviour is, i.e., dependent on age, cognitive development and, in particular, on socialisation. In the context of socialisation, the parent-child interaction and self- and co-determination of children are of particular importance for children to become independent market participants. Parents who actively communicate with their children, take them shopping and give them influence on family purchasing decisions, enable them to gain experience regarding market exposure. The purpose of this study is to examine the influence of child socialisation on shopping behaviour using a computer-based shopping simulation. The results show that for children, their self-determination and family communication play a significant role.

Keywords: Shopping Behaviour, Computer-based Shopping Simulation, Children's Socialisation

Track: Social Responsibility & Ethics

1. Introduction

For companies, children are an important group of (potential) customers (Baldassarre et al. 2016). Cram and Ng (1999) describe the salience of children in the consumer world as follows: „Even before they learn to read, write, or do arithmetic, children have already become consumers“. From the age of 2 years, children articulate product wishes and thus influence the consumption and purchasing behaviour of their parents (McNeal 2007). They do this, for example, by articulating consumer wishes or by helping to decide where the family should go on vacation. However, children do not only act as influencers in the consumer world. Around the age of six, children make their first purchasing decisions on their own (McNeal 2007). That's why children are also an important target group for marketing in the consumer world. As a result, children are confronted with an enormous number of products and promotions aimed at them and precisely tailored to their needs (Mau et al. 2015). According to a Children's Media Study in 2019, 4-to13-year old children in Germany have an average of about 20€ in pocket money each month. In some cases, this budget is increased by additional cash gifts or additional income. An important aspect in this regard is that most of the children are allowed to decide for themselves what they spend their own money on (Children's Media Study 2019).

It should be noted that children are still developing their cognitive abilities. Moreover, they have little experience regarding the functions of the market in relation to the complex world of consumption. Therefore, children as consumers are characterized by these limitations and cannot act with the same knowledge as adults (Mau et al. 2015). Based on consumer socialisation, it can be concluded that parents and siblings act as socialisation agents and influence children's attitudes, norms and behaviours (Basu and Sondhi 2014). Through these socialisation agents, a social environment is created whereby children learn to become consumers. Analyzing the consumer socialisation of elementary school children can help to draw conclusions about their shopping behavior. For this reason, it is important to investigate to what extent the family environment influences children's shopping behaviour. The family is closest to their children and therefore has a direct influence on them. Previous research analyses that parental interventions prompt children to regulate their motivations, for example, and influence the overall outcome of consumer socialisation (Li et al. 2019). Thus, studies dealt with the influence of competencies in the context of advertising in i.e., social networks on shopping behaviour and the influence of advertising competencies on it (Vanwesenbeeck et al. 2017). Other researchers in the advertising context examined children's level of advertising literacy for traditional and embedded advertising formats by comparing

their cognitive and affective level of advertising literacy for television commercials with advertising games (Hudders et al. 2016), showing the influence and importance of cognitive skills, among others. On that account, this study serves to fill this research gap. It is assumed that independent action in particular plays an important role in achieving high performance in computer-based simulation. Therefore, the following research questions arise: How does consumer socialisation influence children's self-determination? Does self-determination lead to children making good purchasing decisions?

2. Theoretical Framework and Hypotheses Development

2.1 Consumer socialisation

On the basis of socialisation, children acquire skills, perceptions and beliefs that are important in order to adapt and integrate more easily into the local culture (Baumrind 1980). Socialisation goals are determined by the prevailing culture and parental behaviour. In Western cultures, the goal is to develop an individual sense of identity and self-reliance (Triandis 1995). On this basis, children are well prepared for adulthood and make their own decisions. Parents are responsible for children being able to take individualistic actions, to pursue their own initiatives in order to achieve their goals. As a result, children can act in a self-determined manner in a shopping situation. This approach to understand parent-child interactions turned out to be an important component of consumer socialisation. Accordingly, the family is one of the most important social factors that influence the process of consumer socialisation (Basu and Sondhi 2014). Through self-determination in family shopping and communication within the family, children learn important skills to become independent, self-reliant and competent consumers. Especially shopping together and communicating with parents, is an important method of socialisation because children can exchange experiences with their parents, collect and observe their parents (Blackwell et al. 2001). Another important socialisation factor is the internet and the ability to use a computer or tablet. (Hill and Beatty 2011). In the context of the computer-based simulation this technical knowledge is helpful in order to be able to cope with the task in this study (virtual purchasing). Based on the theory, the following hypotheses are derived.

2.2 Hypotheses Development

Our research project addresses two dimensions of parenting style. One is that parents control their children, for example, by always knowing where their children are. Second, that parents show affective warmth to their children and encourage self-determination (Baumrind 1991).

Carlson and Grossbart (1988) also examined parenting style with consumption-related shopping behaviour. In addition to the influence of parenting style, parents' responses to their children's emotions, particularly self-regulation, also appear to be influential. For example, Eisenberg, Smith, and Spinrad (2011) found effective self-regulation strategies in children whose parents responded appropriately to their children's emotions. Therefore, it is assumed that parents who encourage their children to act in a self-determinate manner show better performance in the simulation. We propose the following hypothesis:
H1: High self-determination has a positive impact on the child's performance in the computer-based simulation.

High parental control means that children are not encouraged to act in a self-determined way. For example, the study by Soenses and Vansteenkiste (2010) showed that parental control limits children's self-determination. Parental control ensures that children adhere to rules and independent behaviour which is not considered positive in this context (Baumrind 1991). However, it is precisely self-determined action that leads children to demonstrate high performance in simulation. Thus, the following hypothesis arises:
H2: High Parental Control has a negative impact on the child's performance in the computer-based simulation.

Family communication influences the development of children's buying and consumption behaviour. Carlson, Grossbart, and Stuenkel (1992) also showed that family communication patterns are related to parenting style. Other researchers also assume that open and active communication leads to children acting in a purposeful and self-determined way (Caruana and Vassallo 2003). Haselhoff (2013) also showed that communication about shopping is important for children to improve their consumer behaviour. Therefore, we assume that family communication plays an important role in enabling children to achieve high performance in the simulation. On this basis, we propose the following hypothesis:
H3: High family communication has a positive influence on the child's performance in the computer-based simulation.

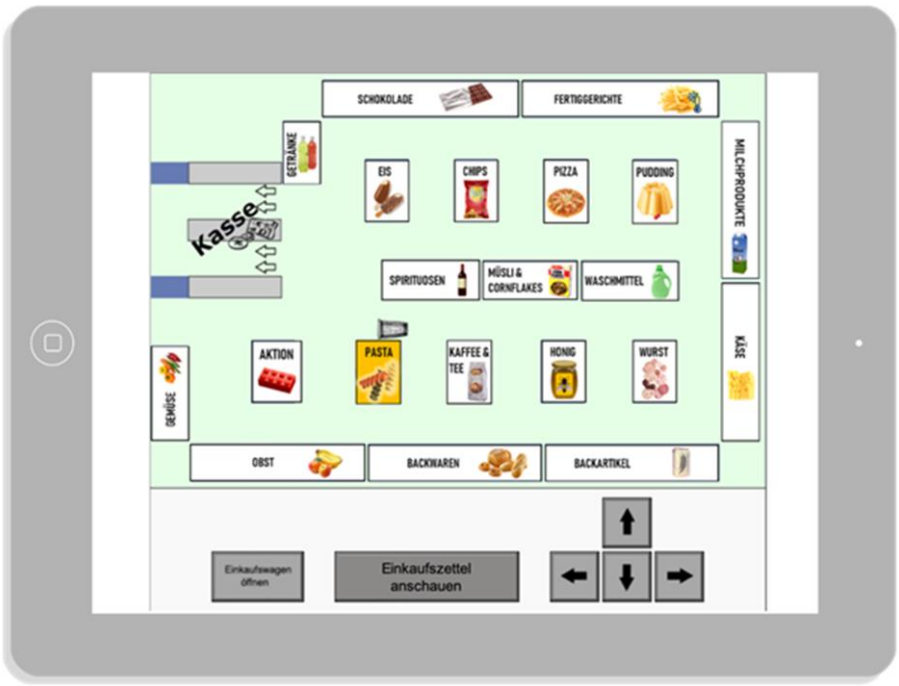
3. Method and Procedure

Eight- to ten-year-old schoolchildren from the third and fourth grades were surveyed for the data collection. This age group was selected because from the third grade, or from the age of 8, it can be assumed that children can both read (Guo et al. 2011) and that their language and reading skills are sufficiently developed to conduct interviews with them (Borgers, Leeuw, and Hox 2000). Questionnaires have to be developed specifically for this age group and

standardized questionnaires for adults cannot be used because children's language skills are still developing (Borgers, Leeuw, and Hox 2000). The knowledge test consisting of multiple-choice items was linguistically checked by primary school teachers before the study was carried out to ensure that the linguistic requirements, as well as the vocabulary, were chosen in accordance with the target group. The school classes were heterogeneously selected with regard to different variables, such as social background, in order to achieve a high representativeness of the results. A thumb scale (5-point Likert scale) was used to measure the various items within the relevant constructs. The constructs on which this study is based (self-determination, parental control and family communication) go back to Bos and Pietsch (2004). The scale ranges from 1 (totally agree) to 5 (totally disagree). Before each new block of questions, the children were read which topic they were being asked about and the interviewers gave short instructions on how to answer the questions. In this analysis, Cronbach's alpha values of < 0.7 for the relevant constructs are obtained for child self-determination, parental control, and family communication. Since the constructs were measured reflectively, it can be assumed that the individual items are not necessarily interchangeable, which means that the values tend to be below the value of 0.7.

Data collection consisted of a combination of individual interviews followed by a run-through of a computer-based shopping simulation. An additional 10-15 minutes were allotted for the realistic shopping simulation, in which the children were given actionable tasks. In figure 1 the virtual supermarket is demonstrated.

Figure 1: Structure and Design of the Virtual Supermarket



The individual scores for purchasing literacy, i.e. the child's performance in the computer-based simulation were estimated using Weighted Maximum Likelihood Estimates (WLE; Warm 1989) for each student. Consequently, we report the WLE reliability as an estimator of the test's overall reliability in the given sample (Drake et al. 2021). Each interviewer interviewed two children per school lesson, i.e. 25 to 30 minutes were planned for each child. iPads were used for data collection, as this meant that cursor and mouse control could be dispensed with, and the students could intuitively guide the shopping cart with their fingers during the shopping simulation. In order to measure the validity of the constructs and to check if the questionnaire works in its format and with all contents, a test run with N= 31 children was conducted. After some adjustment based on the pretest, the main data collection was conducted with N= 136 children. In order to achieve meaningful results, a high degree of standardization was ensured in the way the tests were conducted. Therefore, all interviewers followed the same procedure during the interviews. The dataset included 60% female students and shows an average age of M = 9.12 (SD=.811).

4. Results and Discussion

Multiple regression analysis was performed for the data evaluation. First, the overall model was estimated. R^2= .124 of the variance of the WLE can be explained by the independent variables Self-Determination, Parental Control and Family Communication. This impact is significant (p= .002). Then we looked at the exact values within the multiple regression model for each construct to test our hypotheses. We measured the influence of Self-Determination on the WLE to make a statement about H1. The results show that we can support H1. Self-Determination has a significant influence (p= .043) on the WLE, i.e. the child's performance in the computer-based simulation. The WLE increases by .306 units when Self-Determination increases by 1 unit. In contrast, we must reject H2, the influence of Parental Control on the WLE (p= .235). We find a negative ß-value of -.178, which means that Parental Control has a negative impact on the WLE, as postulated, but this influence is not significant, and the hypothesis cannot be supported. Thus, the self-determination of the children seems to be a much more decisive factor than the parental co-determination or the parental guidelines that are imposed on the children. In contrast, we were able to find with H3 that it does matter whether the family members interact with each other, because Family Communication has a significant influence on the WLE (p= .004). Thus, we find support for H3. The WLE increases by .597 units when Family Communication increases by one unit. The results of the multiple regression analysis are illustrated in Table 1.

Table 1: Results of Multiple Regression Analysis

Hypothesis	Independent Variable	Dependent Variable	ß	p
H1	Self-Determination	WLE	.306	.043
H2	Parental Control	WLE	-.178	.235
H3	Family Communication	WLE	.597	.004

Note: Items are measured on a 5-point Likert scale ranging from “totally agree” to “totally disagree” to a specific statement

Overall, the results show that socialisation has an influence on children's performance in the computer-based simulation. However, it is necessary to analyse in detail which socialisation factors are of decisive importance. What seems to be much more important is the children's self and co-determination. In accordance with the hypothesis (H1), it has already been found that parents who support children's needs for self-determination promote their children's development. It is therefore important for children to be able to help shape everyday family life, for example by being taken along on the weekly shopping trip. Because this allows children to further develop and internalize self-control mechanisms (Büttner, Florack, and Serfas 2014). Children that are allowed to participate, have shown a high performance in the simulation. Therefore, it can be concluded that self-determination leads children to develop good shopping behaviour. However, if communication with parents develops in the direction of imposing rules on the children or if parents want to control their children in their activities (parental control), we see that this no longer has a positive influence on the children’s performance in the computer-based simulation. Thus, the second hypothesis (H2) cannot be supported in this study. Nevertheless, we maintain this because it has already been shown in another context that parental control affects children's self-determination (Soenens and Vansteenkiste 2009). The last hypothesis (H3) could be confirmed. Communication within the family appears to be a socialisation basis that enables children to develop good purchasing skills. Consequenty, family communication leads to children that develop into independent and self-determined consumers. This is also consistent with other study findings that report that active parent-child communication is important to support children's development (Haselhoff 2014). Thus, children can be motivated to save their money or to allocate it through targeted communication. This in turn leads to the children being encouraged to develop or internalize self-control mechanisms.

In addition to the hypotheses that were raised, we conducted further analyses. First, if parental control has an influence on WLE, it was reasonable to assume that WLE might be more pronounced if the children have older siblings. Older siblings may exert comparative

influence during shopping as parents do (Basu and Sondhi 2014). However, the data show that there is no significant relationship here, which again suggests that it is more self-determining factors, something that goes from the child from within and exerts influence on the performance in the computer-based shopping simulation.

5. Implications, Limitations and Further Research

Addressing our research questions, the results of this study have shown that children's self-determination and participation, as well as open communication within the family, promote children's independence (Bernier et al. 2010). Thus, we see that socialisation has an impact on children's self-determination. Independent action seems to play a crucial role and positively influences shopping behaviour in the computer-based simulation. This implies that children should be encouraged to think and act independently and be supported by their parents to develop them into independent, competent market participants. Of particular importance in raising children to be independent market participants is that parents should help their children, through active parent-child communication, to influence competent family's purchasing decisions. Since the children surveyed are mostly between the ages of eight and ten, their age-related, cognitive limitations and response abilities must be taken into account when interpreting the results. In addition, the sample contains a number of N=136 students. As the number of subjects increases, the reliability of the results increases. As a result, it would be interesting to see how the results of the data change after a more extensive survey. The various constructs considered in this study, such as the WLE in the computer-based shopping simulation, parental control, and family communication, were collected exclusively from the children's perspective. Future research could contrast children's and parents' responses to also explore parental assessment and, for example, relate parenting styles to children's shopping competence.

6. References

Baldassarre, F., Campo, R., and Falcone, A. (2016). Food for Kids: How Children Influence their Parents Purchasing Decisions. *Journal of Food Products Marketing*, 22(5), 596-609.

Basu, R. and Sondhi, N. (2014). Child socialization practices: implications for retailers in emerging markets. *Journal of Retailing and Consumer*, 21(5), 797-803.

Baumrind, D. (1980). New directions in socialization research. *American Psychologist*, 35(7), 639-652.

Baumrind D. (1991). The influence of parenting style on adolescent competence and substance use. *Journal of Early Adolescence*, 11.

Bernier, A., Carlson, S.M., and Whipple, N. (2010). From external regulation to self-regulation: early parenting pre- cursors of young children's executive functioning. *Child Development*, 81, 326-339.

Blackwell, R., & Miniard, P. W. (2001). Consumer Behavior (9th ed.). Orlando: Harcourt.

Borgers, N., de Leeuw, E., Hox, J. (2000). Children as respondents in survey research: cognitive development and response quality. *Bulletin de Méthodologie Sociologique*, 66, 60-75.

Bos, W., Pietsch M. (2004). KESS-4-Studie, Kurzbericht, Hamburg.

Büttner, O.B., Florack, A., Leder, H., Paul, M.A., Serfas, B.G., Schulz, A.M. (2014). Hard to ignore: impulsive buyers show an attentional bias in shopping situations. *Social Psychological Personal Science*, 5 (3), 343-351.

Carlson, L., Grossbart, S. and Stuenkel, J. K. (1992): The role of parental socialization types on differential family communication patterns regarding consumption. *Journal of Consumer Psychology*, 1(1), 31-52.

Carlson, L., and Grossbart, S. (1988). Parental Style and Consumer Socialization of Children, *Journal of Consumer Research*, 15, (1), 77-94.

Caruana, A., Vassallo A. (2003). Children's perception of their influence over purchases: The role of parental communication patterns. *Journal of Consumer Marketing*, 20, 55-76.

Cram, F., Ng, S.H. (1999). Consumer socialization. *Applied Psychology: An International Review*, 48, 297-312.

Drake, P., Froitzheim, M., Hartig, J., Kröhne, U., Mau, G., Schramm-Klein, H., and Schuhen, M. (2021). Extended Competence Modelling with Process and Product Data: Analysis of Log Data from a Computer-Based Simulated Supermarket using the Finite State Machine Approach [Symposia]. *9th European Congress of Methodology - EAM 2021*, Valencia.

Eisenberg, N., Smith, C. L., and Spinrad, T. L. (2011). Effortful control: Relations with emotion regulation, adjustment, and socialization in childhood. *K. D. Vohs & R. F. Baumeister (Eds.), Handbook of self-regulation: Research, theory, and applications*, 263-283.

Guo, Y., Connor, C.Mc., Tompkins, V., and Morrison, F.J. (2011). 'Classroom quality and student engagement: contributions to third-grade reading skills'. *Frontiers in Psychology, Educational Psychology*, 2 (157), 1-10.

Haselhoff, V., Faupel, U. and Holzmüller, H.H. (2014). Strategies of children and parents during shopping for groceries, *Young Consumers*, 15 (1), 17-36.

Hill, W.W., Beatty, S.E. (2011.). A model of adolescents' online consumer self-efficacy OCSE. *Journal of Business Research* 64 (10), 1025-1033.

Hudders, L., Cauberghe, V., and Panic, K. (2016). How advertising literacy training affect children's responses to television commercials versus advergames. *International Journal of Advertising*, 35(6), 909-931.

Kinder-Medien-Studie (2019): https://www.kinder-medien-studie.de, last accessed 28.11.2021.

Li, D., Liu, Y., and Li, S. (2019). Understanding how parents affect children's consumer socialization? An analysis based on grounded theory. *In 2019 16th International Conference on Service Systems and Service Management*, 1-6.

Liao, L. L., Lai, I. J., Chang, L. C., and Lee, C. K. (2016). Effects of a food advertising literacy intervention on Taiwanese children's food purchasing behaviors. *Health education research*, 31(4), 509-520.

McNeal, J. U. (2007). On becoming a consumer: the development of consumer behavior patterns in childhood. London: Butterworth-Heinemann.

Mau, G., Schuhen, M., Schramm-Klein, H., Schürkmann, S., und Steinmann, S. (2015). Treffen informierte Kinder kompetentere Kaufentscheidungen? Kaufkompetenz von Kindern und Ansatzpunkte für die Verbraucherforschung – Leitbilder, Information, Demokratie. *Essen: Klartext*, 111-128.

Soenens, B., & Vansteenkiste, M. (2010). A theoretical upgrade of the concept of parental psychological control: Proposing new insights on the basis of self-determination theory. *Developmental Review*, 30, 74-99.

Thaichon, P. (2017). Consumer socialization process: the role of age in children's online shopping behavior, *Journal of Retailing and Consumer Services*, 34, 38-47.

Triandis, H. C., & Suh, E. M. (2002). Cultural influences on personality. *Annual Review of Psychology*, 53, 133-160.

Warm (1989). Weighted likelihood estimation of ability in item response theory. *Psychometrika*, 54 (3), 427-450.