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Intergroup Bias of Primary School Students in South Korea:

A Study of Racial Attitudes, Perceptions of Similarity, and Friendship Potential

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MSc Education (Child Development and Education)

Dissertation submitted in part-fulfilment of the requirements for the degree of Master of Science in Education: Child Development & Education

ACKNOWLEDGEMENT

I would first like to express my genuine gratitude to my supervisor, Sonali Nag, for all of her academic and emotional support. Amidst the global pandemic and the accompanying anxiety, her constant reminder of staying calm and focusing on what can be done allowed me to sort out the priorities and keep going on. She has been patient with me and challenged me to go beyond my interests in stride. Whenever I felt lost, she was there to remind me that it could be done. Not only was her supervision helpful academically, but working with her had equipped me with the mindset of a researcher and will remain a valuable asset throughout my next journey.

Special thanks go to my beloved family. With their love and care, I was not alone and well-nourished. I would like to particularly thank my grandma, who has raised me with overflowing love. She has set an example of diligence, persistence, and kindness. Through her lessons and support, I was able to dream big.

Furthermore, this dissertation could not have been done without the commitment of the parents and participants of my study. Despite the lengthy video call sessions, none of the participants dropped out and eagerly participated, motivating me to work harder out of respect.

I must extend my gratitude to all of the people I met either online or offline in the CDE course. There was endless support from the tutors and librarians in all situations. The fruitful discussions, memorable quotes, and much-needed jokes I shared with my peers in CDE will be cherished for a very long time.

A final thank you goes to my dear friends, who always managed to put a big smile on my face in tough times. When recruitment was going nowhere in the pandemic situation, their encouragement has been a great source of hope and energy to keep moving forward.

ABSTRACT

Racial intergroup bias refers to favouring one's own racial group while derogating members of a different race. Childhood is considered the optimal time to prevent biases that can instigate discrimination and racial conflict, which has thus led to considerable attention on the development of children's racial intergroup bias. The aim of this study was to explore the three domains of intergroup bias, namely racial attitudes, ethnic categorization, and cross-race peer relations in South Korean children. Furthermore, the study explored how children's perceptions of similarity are played out in children's intergroup bias. 82 children in first and third grade were recruited from five provinces of South Korea.

To explore the development of intergroup bias and the ways in which perceptions of similarity affect children's bias, the present study adopted two existing measures but expanded upon these measures in various ways: Multi-Response Racial Attitude Measure to measure children's racial attitude and the Similarity Task to measure children's ethnic categorization and cross-race peer relations. For a comprehensive understanding on children's bias, a mixed-method research design was employed. Quantitative analysis revealed that children hold different attitudes toward different racial groups and that children attend to multiple sources of similarity when categorizing peers and judging the friendship potential of peer dyads. Qualitative analysis not only supported such findings as similar patterns of themes were identified but also found children's developmental sophistication implied in their responses.

The findings suggest that children can clearly see the difference between racial groups and exhibit bias. However, a closer look into their similarity perceptions revealed that though children focused on racial features when judging peers, they also paid attention to other sources of similarity such as hobby and language in those judgments. That is, dyads that shared hobby or language were judged to be more similar and more likely to be friends than the dyads that did not share hobby or language. Particularly, in some cases, same hobby or same language conditions were more important than race in their similarity judgment. Likewise, in their friendship potential judgment, children judged different race dyads who spoke the same language as more likely to be friends than same race dyads that did not speak

the same language. These findings pointed to a new direction that education policies of Korea should take in order to promote interracial peer relationships.

The present study was the first to examine the perceptions of similarity in Korean children's bias and thus made an important initial step. Future studies should continue identifying other powerful sources of similarity that could downplay racial differences between racial groups and explore diverse components of bias to understand the multifaceted layers of bias.

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1. Introduction

1.1 Children's racial bias development

Racial conflict continues to become a critical issue in many societies, while a growing number of countries become racially and culturally more diverse. In order to promote harmonious societies, social and developmental scientists have explored the origins of such conflict and argued for childhood as the optimal time to intervene. This is because early manifestations of the tendency to favor their own racial group begins in young children. Known as intergroup bias, a key trigger to racism, intergroup bias has been found in children as young as three years of age and continues to increase through ages seven-eight .

Children exhibit intergroup bias in a number of ways. For instance, they attribute negativity to the other race (e.g., Doyle & Aboud, 1995), assume homogeneity within race (e.g., Margie et al., 2005), and prefer to befriend same-race and thereby reject peers of different skin colour (e.g., Levy, 2001). Such race-based categorization of people is more difficult to change in adulthood as they become entrenched patterns of behaviour and cognition (Lee et al., 2017). With this in mind, timely intervention could be made in childhood and therefore the development of children's racial intergroup bias continues to receive considerable attention.

The development of intergroup bias is a complex process intertwined with developmental factors (Aboud & Amato, 2001). Therefore, to unveil the multifaceted layers of bias, different components of intergroup bias have been examined within the domains of attitude, cognition, and behaviour (Hewstone et al., 2002). Accordingly relevant developmental factors to different domains of bias have been discovered across different countries. As with many other country settings, the topic of children's racial intergroup bias development has also received interest in Korea[1], the research site of this study, as the country began to witness a surge in immigration especially since the 1990s (Choi, 2021).

[1] Korea is taken throughout as South Korea in this paper

Korea has transformed into a heterogeneous society and social issues around race have become more salient. To understand bias development within the Korean context and to explore the past studies on young Koreans' bias, two main search engines of Korea—RISS (Research Information Sharing Service) and KISS (Korean studies Information Service System)—were searched. The search indicated that the researchers and practitioners have recognized racial bias in young Koreans since the 2000s but there has been a lack of diverse tools to assess various components of bias in Korean children. Instead, there has been a heavy focus on assessing the level of prejudice in children through questionnaires. Therefore, to address the limitation in measurements and to offer a comprehensive understanding of the multifaceted components of bias, the present study examined three domains of bias in Korean children: racial attitudes, ethnic categorization, and friendship potential.

Investigating developmental factors related to racial bias could also help understand children's bias development. For instance, past studies examined children's perceptions of similarity regarding race to investigate whether children make race-based categorization of people, which could in the end lead to bias. Katz et al. (1975) and Doyle and Aboud (1995) found that children who focused on racial similarity had high prejudice. That is, those who rated members of a different race as dissimilar and members of the same race as similar had high levels of prejudice. In line with their findings, McGlothlin et al. (2005) expanded the work by adding more sources of similarity other than race and demonstrated that children considered both race and sports interest when judging similarity of same-race and different-race peer dyads.

While McGlothlin et al.'s (2005) work represents a meaningful initial step toward investigating the relative significance of race compared to other sources of similarity, no other sources of similarity have been added to their work since then. Moreover, while the authors deliberately asked children to give reasons for their judgment, children's responses to open-ended questions were sorted into the authors' pre-set categories. This inevitably predisposed the authors to concentrate on the categories of their interest and concealed important developmental findings implied in their responses. The present study therefore aimed to address such methodological limitations by examining other potential sources of similarity and adapting a mixed-methods design for more accurate understandings of children's bias

development. This could bring insights into reducing children's racial intergroup bias and in turn help promote amicable interracial peers and inform the design of educational interventions. Overall, investigations on a new country context and expanding the measures of the past studies could offer comprehensive knowledge on bias development in Korean children and beyond

1.2 Rationale for the study

The present study aimed to address the gaps in literature and extend the child development literature on children's bias to a new country context. Existing tools for measuring children's bias have substantially focused on Western contexts. However, to support research on this topic and to endorse the use of existing measures in different contexts, the existing tools need to be extended to diverse country contexts. This study, therefore, aimed to contribute by expanding the applicability of the existing tools to Korea. Furthermore, expansions were also made within the tools to address the methodological limitations. The overall aim of our study was to investigate three domains of bias and understand the role of children's perceptions of similarity in their racial intergroup bias.

1.3 Structure of the dissertation

The second chapter presents the literature review and outlines the theoretical framework of the study. Empirical research on different domains of bias will be discussed while the existing tools to measure each of them will be critically reviewed in order to explain the choice of tools used for the present study. As this study is situated in the Korean context, an overview of the educational research and policies related to bias will be discussed.

The third chapter describes the methodology of this study and outlines the research design, instruments, participants, research procedures, and ethics.

The fourth chapter presents the results for each research question. The analytic strategy is described followed by the preliminary analyses and then the main analyses.

The final chapter discusses the main findings of the study and situates the present study within the context of the children's intergroup bias literature. The limitations of the study are presented along

with suggested directions for future research. Finally, this chapter highlights the potential contributions of the present study to research and educational policies of Korea. A final conclusion is then discussed.

2. Literature review

In order to understand the nature of young children's intergroup bias, this chapter will define intergroup bias and present three domains of intergroup bias in three sections. While a large body of work has identified numerous aspects of children's racial intergroup bias, the following sections will focus on the three following aspects: racial attitudes, ethnic categorization, and cross-race peer relations. Furthermore, an overview of the Korean context on this topic will be discussed. Finally, the chapter will conclude by describing the purpose of the present study while identifying the limitation of past literature. Reviewing the findings of the past studies and identifying gaps within them will help explain the research design of the current study.

2.1 Children's intergroup bias

2.1.1 What is intergroup bias?

Intergroup bias refers to the systematic tendency to evaluate in a positive way towards one's own membership group (in-group) than a non-affiliated group (out-group) (Hewstone et al., 2002). Not only do children become aware of race at a young age but they also begin to use race to divide people in categories at four or five years (Aboud & Amato, 2001). Over-using these categories further develops into racial intergroup bias where the judgment of people is not based on the individual characteristics, but on assumed membership. From the 1930s, social and cognitive-developmental psychologists have looked into the development of racial awareness in young children and their racial bias (e.g., Bogardus, 1930; Clark & Clark 1947; Goodman, 1946; Hartley, 1944; Powdermaker, 1944). Since then, various influencing factors have been investigated, resulting in the formation of two theories on this topic: social theory and cognitive-developmental theory.

Two theories found in the literature differ in the way each looks at the role of the child. Social theory views children as recipients of social knowledge gained from adults and peers, whereas cognitive-developmental theory has criticized this approach by emphasizing the active role child plays in the acquisition of bias. That is, while the social theory argues that children duplicate and internalize the attitudes shown from others, the cognitive-developmental theory proposes that the child's attitudes are the result of the social knowledge a child actively constructs based on interactions with the social

world, which includes parents, peers, and the broader culture (Smetana, 1997). The following sections elaborate more on these two theoretical frameworks.

2.1.1.1 Social theory

Based on Allport's (1954) intergroup contact theory, empirical studies have explored whether social influences from parents, peers, intergroup contact, and media have an impact on children's racial bias (e.g., Brown et al., 2007; McGlothlin & Killen, 2010; Rutland et al., 2005; Sinclair et al., 2005; Vezzali et al., 2012). While evidence from Castelli et al. (2009) demonstrated a significant correlation between parent's implicit bias and child's bias and Aboud and Doyle (1996) found that low-prejudice peers could influence high-prejudice friends to have a more tolerant view, there were also a significant number of studies that found mixed results of the relationship between the child and their social surroundings. Departures include variables such as parent's bias and intergroup contact. For example, some studies suggest that parent's explicit biases were not related to the child's (e.g., Castelli et al., 2009; Jugert et al., 2005; Quintana & Vera, 1999; Vittrup & Holden, 2011) and in some cases, they were even negatively related (e.g., Branch & Newcombe, 1986). Additionally, despite the substantial amount of effort researchers have put in to prove the positive effect intergroup contact experience has on bias reduction (e.g., Cameron et al., 2001; McGlothlin & Killen, 2010; Rutland et al., 2005), some studies found that intergroup contact actually increased children's bias levels (e.g., Kurtz-Costes et al., 2011; Vezzali et al., 2012), whereas some even reported no relations (e.g., Aboud et al., 2012; Gibson et al., 2017; Vittrup & Holden, 2011)

These mixed findings of the role of social factors imply that children's intergroup bias cannot be fully understood without taking cognitive-developmental factors into account. In line with the cognitive-developmental theory, children do not simply internalize the attitudes shown by others, but depending on the development of their cognitive abilities, a child actively interacts with the social world which may be the cause of the above-mentioned mixed results. Thereby to understand the mechanisms within a child, the cognitive-developmental aspects of bias must also be investigated.

2.1.1.2 Cognitive-developmental theory

Cognitive developmental theory considers bias as the reflection of children's cognitive

development. In other words, a cognitive deficit may be instrumental to developing a bias whereby cognitive maturation can help reduce bias. That being said, social inputs children receive from their significant others will only be influential depending on the cognitive development taking place within the child (Aboud & Amato, 2001).

Certain areas of cognitive development relevant to bias development have been identified by cognitive-developmental psychologists. Piaget's theory suggest that cognitive limitations of children in the preoperational stage of cognitive development, such as their tendency to over-use certain observable features to categorize people, accentuate the influence of certain physical features in the development of racial bias (Piaget & Weil, 1951). Along with Katz's (1973) finding that preschoolers perceive people from other race groups as more homogenous than people of their own race, Katz (1976) further developed a cognitive-developmental framework suggesting steps in the bias development. Beginning from three to five years of age, children form categories by applying labels and evaluations of others. After five years, judging based on the constructed categories, children begin to focus on the difference between racial groups and homogeneity within racial groups. Aboud (1988) supported this body of work by claiming that children's cognitive level impacts children's perceptions of race. Children in their preoperational stage of cognitive development hold biased behaviour until seven or eight years of age but start moderating their bias once they enter the concrete operational stage of cognitive development as they achieve cognitive advancement relevant to counter-bias attitudes

In line with this theory, researchers in the 1970s-90s focused on identifying the areas of cognitive development related to children's racial bias namely, multiple classifications, conservation, perspective-taking, reconciliation, perceived similarity of groups, and egocentrism (Bigler & Liben, 1993; Black-Gutman & Hickson, 1996; Clark et al., 1980; Doyle & Aboud, 1995; Katz & Zalk, 1978) . Based on the findings of the relevant cognitive abilities, scholars went a step further from the early 2000s. A growing number of experimental studies were conducted with an aim to develop interventions that train cognitive skills relevant to bias reduction (Aboud, 2003; Bernstein et al., 2000; Bigler & Liben, 2007; Johnson & Aboud, 2017). For instance, Bigler and Liben (2007) demonstrated the effectiveness of training empathy and perspective-taking skills in promoting positive intergroup attitudes and a meta-

analysis done by Beelmann and Heinemann (2014) has confirmed their point, especially in primary school children.

While considering both social and cognitive-developmental factors is crucial to have a holistic understanding of the development of intergroup bias, the cognitive-developmental theory is central to the current study as this study explored cognitive aspect of racial bias through assessing the influence of children's perceptions of similarity on their bias. Investigation into the societal and historical context of the Korean children's bias development seems to suggest the importance of the perceptions of similarity in their bias development (see section 2.3.1). However, to the best of our knowledge, there has been little discussion on this topic with young Koreans. Therefore, the author aimed to fill the gap by exploring young Koreans' perceptions of similarity expressed in different domains of children's intergroup bias. To further understand how cognitive factors influence intergroup bias development, past studies examining the general trajectory of bias development were reviewed.

2.1.2 The developmental trajectory of intergroup bias in children

Extensive research on the development of bias revealed a common trajectory of bias development in young children. Children as young as three years show bias and it increases with age, reaching a peak between five to seven years. After reaching the peak, children begin to show a decrease in bias (see reviews, e.g., Cristol & Gimbert, 2008; Hailey & Olson, 2013; Skinner & Meltzoff, 2019). A meta-analysis study conducted by Raabe and Beelmann (2011) combined empirical studies on age-related changes in children's bias and offers good evidence on this developmental trend.

To understand the reason for this developmental pattern of intergroup bias, cognitive-developmental psychologists refer to Piaget's (1967) theory of cognitive development, which presents children's development on a continuum of four key stages where each stage represents a qualitatively different level of thinking and reasoning: the sensori-motor period, the pre-operational stage, concrete operational stage, and formal operations. In this regard, Aboud and Amato (2001) pointed out that a number of cognitive processes in preoperational children such as the perceived similarity within groups, egocentrism, and ethnic self-identification (Doyle & Aboud, 1995; Bigler & Liben 1993, Hirschfeld, 1996) could potentially be instrumental in the acquisition of bias whereas concrete operational

capabilities such as conservation, reconciliation, and multiple classifications help break down bias in middle childhood (Bigler & Liben, 1993; Black-Gutman & Hickson, 1996; Clark et al., 1980; Doyle & Aboud, 1995; Katz & Zalk, 1978).

In line with Piaget's theory of cognitive development, the current study explored the intergroup bias of Korean children in first grade and third grade. According to Piaget's theory, children in first grade are preoperational children moving toward the concrete operational stage. Accordingly, children at this age are in the midst of adopting cognitive skills which may help them overcome the cognitive deficits from the stage before. Thereby comparing children in first grade and third grade children will help us understand the cognitive processes related to intergroup bias such as perceived similarity within and between groups and multiple classification skills. For a comprehensive understanding on the development of bias in young Koreans, the current study looked into three main domains of intergroup bias elaborated in the following sections.

2.2 Different dimensions of intergroup bias

Given the complexity of intergroup bias, bias has been analysed in multiple aspects to thoroughly understand the nature of the construct including its origin and causal factors. (Aboud, 1988; Brown, 1995; Hirschfeld, 1996; Raabe & Beelmann, 2011; Skinner & Meltzoff, 2019). This has led to the identification of different components of intergroup bias: attitudes (prejudice), cognition (ethnic categorization), and behaviour (cross-race peer relations) (Hewstone et al., 2002). The various components of children's bias do not develop simultaneously, which results in little consistency among the different components (Aboud & Amato, 2001). Therefore, when measuring children's bias, examining more than one aspect of bias will be important to gain a better understanding of the construct. With this in mind, this section looks into the past studies that examined different components of intergroup bias.

2.2.1 Children's racial attitudes

A display of unfavorable attitude by expressing negativity towards a particular racial out-group is one form of bias. Unfortunately, this negative expression is not based on individual characteristics, but rather reflects a generalization of the negativity to all members of a certain group based on their

skin colours and nationality (Brown, 1995). Even more, the derogatory attitude leads to less interaction with those racial groups which in the end consolidates the negativity due to the scarce opportunities to break down the hasty generalization. In fact, Aboud et al. (2003) found that children with less biased attitudes had more cross-race interactions with peers and perceived them positively whereas children with prejudiced attitudes avoided such relationships. Measuring children's racial attitudes has been an important aspect to understand children's bias and therefore substantial attention has been given to the assessment of children's racial attitude.

2.2.1.1 Acquisition of racial attitudes

Along with being aware of the presence of these attitudes in children, understanding how these attitudes form and develop is crucial to prevent the formation of such attitudes. As much as racial attitudes are complex, the formation of these attitudes involves a complex process ranging from cognitive to social factors. For example, Rutland et al. (2005) found that preschool children aged three to five showed racial attitudes and demonstrated that children's racial attitudes were related to their interracial contact experience and their understanding on the concept of racial constancy. Likewise, Katz (2003) documented infants to preschoolers' exhibition of racial attitudes at early ages and examined a mosaic of social and cognitive predictors of such attitudes. These findings not only support the aforementioned developmental trajectories but also parallel with the claims of social cognitive theories on the influences of social and cognitive factors in the development of racial attitudes. Moreover, such findings concur with the frequently cited study of Doyle and Aboud (1995). The authors conducted a longitudinal study to demonstrate that children's prejudiced attitudes decrease over the early years of middle childhood and identified two social-cognitive skills related to prejudiced attitudes: (a) low reconciliation skills, which is an ability to understand that each individual could have different racial preferences that may be different with the child's, and (b) perceiving less similarities between members of different race. Parallel to the studies above, extant research literature supported the notion that children are not color-blind and identified social cognitive factors related to the development of children's racial attitudes (e.g., Connolly 2011; Katz & Kofkin, 1997; Kowalski & Lo, 2001).

Despite the establishment of the developmental trajectories of racial attitudes, there exist practical difficulties that researchers must be aware of when assessing children (Tredoux et al., 2009).

In order to justify the choice of measures for the current study, the following section elaborates on the measurement issues.

2.2.1.2 Measuring children's racial attitudes

While the aforementioned studies provide evidence of children's racial attitudes, it is crucial to understand how those attitudes were measured in order to further explore the exact nature of those attitudes. One popular method of assessing children's racial attitudes is based on the trait attribution paradigm such as the Preschool Racial Attitude Measure (PRAM; Williams et al., 1975) and the Multi-Response Racial Attitude Measure (MRA; Doyle & Aboud, 1995). PRAM requires children to attribute 24 evaluative adjective items and 12 filler items to either a white-skinned or black-skinned figure. Although PRAM has been widely used as it assesses children's racial attitudes in numerous contexts, the critical weakness of the measure's forced-choice format limits its usefulness in a way that its results confound children's in-group preference with out-group rejection (Aboud, 2003). When children are forced to choose between their in-group and out-group they tend to favor their in-group, although they do not have any harsh feelings toward the out-group (Kowalski, 2003).

To address this limitation, Doyle and Aboud (1995) introduced an improved variant of PRAM in that children are not forced to assign attributes to either the in-group or out-group, but instead are also given the "both" options. In this sense, Multi-Response Racial Attitude Measure allows for a decoupling of in-group and out-group attitudes as children are not forced to assign the evaluative item to only one racial group. Since Doyle and Aboud (1995) proved the validity and reliability of Multi-Response Racial Attitude Measure, it has been actively used to measure children's racial attitudes, enhancing the reliability of the measure (e.g. Aboud & Doyle 1996; Cameron et al., 2006; Fitzroy & Rutland, 2010; Jung & Oh, 2016; Perkins & Mebert, 2005). Given the non-forced nature of the tool and the wide array of contexts it covers, reflected through multiple evaluative items, the current study used Multi-Response Racial Attitude Measure to explore young Koreans' racial attitudes.

2.2.2 Ethnic categorization

Children's intergroup bias can also be assessed by looking into their ethnic categorization regarding race. Four to five years old children in their preoperational stage of cognitive development

begin to form categories of people (Aboud & Amato 2001). Although being aware of different racial groups and forming categories themselves do not imply racial bias, over-using these categories to make generalized judgments about individuals often leads to an acquisition of bias as the over-use of ethnic categories mask individual's qualities. Likewise, some argue that forming ethnic categories and overusing those categories magnify the contrast between different racial categories and can eventually lead to different evaluations of members of different racial groups (Aboud & Amato, 2001). Empirical research from the past supports this phenomenon, as they found relations between ethnic categorization and children's bias (Aboud & Mitchell, 1977; Katz et al, 1975). Corresponding to these findings, Gaertner et al. (2008) also demonstrated that training children to reorganize social categories reduces their tendency to distinguish groups by certain salient features. More findings on the relevance of ethnic categorization to intergroup bias will be discussed in the following section.

2.2.2.1 Past research on outgroup homogeneity effect

The phenomenon of perceiving less variation across different racial groups than within a racial group is referred to by social psychologists as the outgroup homogeneity effect (Mullen & Hu, 1989; Ostrom & Sedikides, 1992; Quattrone & Jones, 1980; Ryan et al., 1996). When children begin to attend to individual characteristics of group members rather than racial characteristics, they tend to pay less attention to the homogeneity within a racial group, leading to less biased attitudes. A number of researchers have proved this point by investigating children's *perceptions of similarity*. Katz et al. (1975) found that sixth-grade children who perceived individual differences within racial groups had significantly lower levels of bias. Aboud and Amato (2001) also claimed that children in their preoperational stage exhibit more bias as they are unable to use multiple categories and exaggerate distinctions between groups and homogeneity within groups as they solely focus on ethnic categorization. These findings suggest that examining whether children rely on ethnic categorization when judging people could be one way of assessing children's intergroup bias.

2.2.2.2 Assessing children's ethnic categorization

The above findings provide evidence of children's ethnic categorization and outgroup homogeneity effect. However, one may question the validity of the measures used in those studies, since

the assessment method itself may have led the child to focus solely on race if racial cues were the only salient cues to judge from. For example, in Doyle and Aboud's study (1995), when asking the children to make similarity judgments of children from different racial backgrounds (e.g., a White child and a Black child), no other identifying information except race was given, leading the child to focus on race. Different outcomes may be found if the task includes more information about the targets. McGlothlin et al. (2005) support this argument as the authors designed the Similarity Task (ST), an expansion of Doyle and Aboud's (1995) similarity of perceptions measure by adding more parameters to it. In this way, the authors were able to compare the child's attention to racial or non-racial cues when making similarity judgment. As a result, they found that first and fourth grade children did not use race exclusively when judging the similarity but focused on non-racial cues, which is shared sports interests. As the authors have proven that children focus more on non-racial traits than race, it will be meaningful to find other powerful traits children focus on when making decisions about peer dyads.

In this regard, the current study aimed to contribute to the body of knowledge by including more parameters to the Similarity Task, namely hobby, and language. Exploring the relative importance of language compared to race will be especially meaningful in that language provides additional social category that may conflict with children's inference about an individual's racial membership (Kinzler et al., 2009). By doing so, the study aimed to examine how different traits of dyads influence children's similarity judgment and whether children display outgroup homogeneity effect even with the presence of multiple sources of information.

2.2.3 Cross-race peer relations

Another important index of intergroup bias can be found through examining children's cross-race peer relations. Past interracial friendship literature has found that the frequency of cross-race friendships is much lower than same-race friendships and gradually decreases as children get older (Aboud et al., 2003; Davies et al., 2011; Graham et al., 2009). Moreover, children expect individuals to be friends with same-race individuals (Roberts et al., 2017).

Cross-race friendships entail many benefits such as promoting positive intergroup attitudes (Aboud & Levy, 2000; Pettigrew & Tropp, 2000). Therefore, to promote cross-race friendship and

understand why such friendship is less common, it is important to identify the predictors of cross-race friendship by examining the features that children attend to when making judgments about same-race and cross-race friendship possibilities.

2.2.3.1 Predictors of cross-race peer relations

One feature that children focus on when making friendship judgments is similarity. Children tend to have friends who have, for example, the same race, gender, and age with them (Aboud et al., 2003; Clark & Ayers, 1992). This explains children's tendency to become friends with similar rather than different races. Corresponding to Levy's (2000) finding that children who focus on ethnicity preferred same-race friendships more often than children who focused less on ethnicity, children's heavy focus on racial similarity may influence their peer preference. However, the importance of racial similarity in children's decision-making on friendship potential may differ if other sources of similarity beyond race were presented. McGlothlin et al. (2005) presented a hopeful finding in which children tend to judge friendship possible even between cross-race peer dyad as long as they shared sports interests. Therefore, emphasizing non-racial similarity may help expand homogeneity criteria by adding more sources to judge the similarity from when making decisions about friendship. In this context, the current study examined how children's similarity perceptions are played out in their friendship potential judgment when multiple sources of similarity are present.

2.2.3.2 Assessing cross-race peer relations

Friendship could be operationalized in a number of ways while the assessment of friendship varies largely depending on the operationalization (Davies et al., 2011). To assess the frequency of cross-race peer relations or peer preference, some friendship measures assessed children's choices by asking them to choose friends among pictures of children from different racial groups or use one-way friend nominations (Aboud et al., 2003). Presenting photographs of children of different races or nominating the names of their friends by race leads the child to focus mainly on racial information. Although convenient, such measures may not represent a realistic relationship that children have since in reality, many more traits beyond race are set out about an individual. In order to further explore the exact nature of children's friendship and their similarity perceptions, one of the main predictors of

friendship, McGlothlin et al.'s (2005) examined children's judgment on friendship potential by adding the sports interests of same-race and cross-race dyads in the Similarity Task. Here the authors found that children rely on sports interest to judge the friendship possibility. However, while their study offered a better understanding on the relative importance of racial and non-racial cues, children's justification behind those choices was not examined thoroughly as children's responses to open-ended questions were simply sorted into pre-set categories. To address this limitation and expand their study, the current study adopted the Similarity Task with additional non-racial traits in the tool and analysed children's justification qualitatively. Through the expansion of the measure, the current study aimed to offer a better understanding of children's perceptions of similarity and cross-race peer relations, which may ultimately help reduce children's intergroup racial bias and promote cross-race friendship.

2.3 Korean children's intergroup bias

2.3.1 Korean society: a historical and contemporary perspective

While Koreans have considered the Korean society as ethnically homogeneous for a long time, Korea has transformed into a heterogeneous society from the 1990s. Although some Koreans are well aware of this fact through the reports of media and the diverse individuals they encounter in their daily lives, many are yet struggling to accept the change which results in various social problems such as maladjustment and discrimination (Lee & Chae, 2015). Not surprisingly, this systematic exclusion and the resulting conflicts are also reflected in schools. The society's reluctance towards differences may be adopted by the children. For instance, despite the growing number of multicultural students in primary school, young Koreans reject peers of different race and distinguish Koreans versus non-Koreans based on one's skin colour and looks (e.g., Byun, 2010; Chu, 2011; Shim, 2010). In other words, the historical ethnic confinement has continued into the current era.

Labeled as an 'educationally underprivileged class' by the Ministry of Education, children from multicultural families frequently struggle with peer rejection and maladjustment (Lee & Chae, 2015). Taken together, it seems like the once prevalent homogeneous ethnic group idea of 'Korea' is yet leading young Koreans to focus on racial similarity, an attitude that is likely to develop into racial bias. However, a literature search did not reveal any study to examine this premise on young Koreans. Though Shim

(2010) has attempted to measure the level of ethnocentrism and the idea of a homogeneous ethnic group in upper primary school Korean children, merely assessing the presence of such specific concepts through questionnaires does not offer a fundamental understanding on how children perceive race. Therefore, the current study will be a first step in examining young Koreans' perceptions of similarity as reflected in different domains of intergroup racial bias. To inform the design of the current study and have a better understanding of the ways in which race is discussed in Korea, the following sections explore the topic of racial bias in educational policies and past studies.

2.3.2 A review of educational policies on multicultural students in Korea

The Korean government introduced the term "multicultural student (known as *damunhwa-hakseng*)" to label children from families that are made up of members of a Korean national and foreign national spouse. Over the last 30 years, Korea has seen a surge in the number of marriages between immigrants and Koreans (Choi, 2021). In compliance with the demographic changes in Korean society, the government initiated the Educational Plan for Children from the Multicultural Families (EPCMS) in 2006 with an aim to meet the needs of the expansion of such population. However, the EPCMS's focus on a selective group has been widely criticized. As implied in the name of the plan, EPCMS only targeted children from multicultural families, excluding immigrated children and young Koreans. This has led the Ministry of Education to include a multicultural education plan for Korean children in 2007 and for the children of immigrant families in 2010. However, the continued focus on the selective target remains to be problematic as the majority of the policies require one-way assimilation from the multicultural children rather than promoting mutual understandings.

Unlike the literal meaning of "multicultural", the term is closely used to refer to a specific group of children whose parents are from Asian countries such as Vietnam, the Philippines, and China in educational policies (Park, 2017). Until 2017, EPCMS drew a line between children of different racial backgrounds and the rest of the majority Koreans as they divided each group as "multicultural students" and "students in general" respectively. For instance, in one of the policies, it was stated: "to support the harmony between multicultural students and students in general, anti-bias education and multicultural education should be embedded in the national curriculum" (Ministry of Education, 2016).

Although the division is no longer salient in the 2021 EPCMS, the plans are still dichotomous between the multicultural students and the rest. While multicultural children are viewed as a group that needs a wide range of education support to assimilate into Korean society, the majority Koreans receive relatively less attention in multicultural education. Furthermore, education for the majority Koreans is centered on one-time moral lessons that deliver messages on how discriminating against someone based on their racial background is wrong. Ironically, such messages may actually accentuate the difference between race and homogeneity within race in that it once again draws a line between multicultural children and the rest. Although the policies do not overtly state the division anymore, the remained focus on educating multicultural children seems to deliver a wrong message in that only multicultural children should be educated to assimilate into society.

The focus should be shifted to "multicultural education for all". That is, multicultural education should also aim to educate Korean children. This does not mean to increase education sessions on learning about different cultures and race. Instead, more lessons should be on emphasizing similarity between racial groups which could in the end break young Koreans' focus on racial similarity. The government should also be careful with overtly labeling certain groups as "multicultural children" and imply distinction between them and us. Especially when planning education in the early primary school years, they should be mindful that in this stage of cognitive development children tend to categorize people in groups. Likewise, to intervene, it is important to identify developmental changes in children's racial bias. In order to develop an inclusive education for all, more research should be conducted on how young Koreans perceive different racial groups by exploring the relevant factors shaping their bias. A literature search was done to find out what the Korean literature has found on this topic.

2.3.3 Past studies on Korean children's intergroup bias

Along with the Korean government's struggle to educate children through implementing multicultural education in schools, researchers have examined how children exhibit intergroup bias towards different racial targets. Row and Bang (2009) found bias towards Black children in both first and fourth graders while fourth graders showed more implicit bias towards Blacks, which parallels with the findings in Western countries (e.g., Dunham et al., 2008). Overall, young Koreans tend to hold a

higher bias against darker skin colour including Blacks and Southeast Asians (e.g., Jung & Oh, 2016; Row & Bang, 2009; Shim, 2010).

Given these findings, some attempts have been made to identify the relevant factors of racial bias. Jeon and Kim (2019) conducted a meta-analysis to explore variables related to children's bias identified in domestic and international child literature. The variables with large effect size were children's social dominance orientation, empathy, significant others, multicultural education, and media. Among those, multicultural education was reported to be effective only in Korea. The authors interpreted this finding within the historical context, stating that multicultural education programmes are one of the few opportunities Korean children have to learn about other races while many still view Korea as the home for a homogeneous ethnic group. Likewise, the origin of Korean children's racial bias should also be understood within history. Given the long history of emphasizing homogeneity, exploring the role homogeneity has on children's racial bias will be crucial to understand the true reasoning behind children's racial bias. In fact, a similar argument was also made by Chu (2011) as he suggested teaching cross-cutting categories between races (e.g., hobby, food, favorite subject) in Korean's multicultural education curriculum.

Furthermore, a majority of the Korean studies that measured children's bias adopted quantitative methods mostly in the form of questionnaires (e.g., Goh, 2005; Lee, 2009; Lee & Chae, 2015; Shim, 2010). The popularity of measuring bias through surveys left out children in early primary school years, as they are too young to be assessed with questionnaires. However, given the importance of examining children in preoperational stage in bias development, they deserve more attention.

To summarize, this section discussed young Koreans' intergroup bias in the historical context and identified one of the main predictors of their bias, which is their strong focus on racial similarity. Despite the importance of the similarity variable, not much studies in Korea focused on this variable. This speaks to the need to design a qualitative study that examines young Koreans' similarity perceptions which can, in turn, inform policies on multicultural education. With this in mind, this study aimed to fill the gap by adopting a mixed-method study with first and third graders in Korea. The next section elaborates more on the purpose of this study and outlines the gaps in literature the present study

aimed to fill.

2.4 Purpose of the current study

In this chapter, the theoretical framework and empirical evidence on the development of children's racial intergroup bias have been discussed. Bias is an outcome of various developmental factors, both social and cognitive. Owing to the complexity of bias development, it is ideal for the phenomena to be understood within the child's own particular social environment (Connolly et al., 2009). Bearing this in mind a specific factor deemed vital to young Koreans' bias development has been identified, namely the *perceptions of similarity*. Given the historical emphasis on ethnic homogeneity, examining similarity perceptions and their influence on bias is particularly important for understanding bias in Korean children. Despite its importance, not much attention is given to this variable as a majority of Korean studies on bias use a questionnaire design, making it difficult to examine relevant cognitive-developmental factors in children in the early primary school years. Therefore, the present study will be a meaningful first step in examining the perceptions of similarity in young Koreans' bias.

Furthermore, as bias can be expressed in different forms, examining more than one component of bias will be important to gain a comprehensive understanding of the construct. This study focused on measuring three main domains of bias—attitudes, ethnic categorization, cross-race peer relations—and further explored how children's perceptions of similarity are played out in the latter two domains of bias.

To explore the development of intergroup bias and the ways in which perceptions of similarity are affecting children's bias, the present study was designed based on research by Doyle and Aboud (1995) and McGlothlin et al. (2005) but extends in a number of ways. First, additional parameters of hobby and language were added to the work of McGlothlin et al. (2005). Whereby the authors found shared sports interest to be an important source of similarity in children's similarity and friendship potential judgment, the present study aimed to identify other powerful traits that can perhaps prevent children's heavy focus on race in their cross-race peer relations. Second, the current study introduces a qualitative analysis of children's explanations of their judgments. Qualitative analysis on children's responses may provide deeper insights into how children weigh multiple sources of information in their

decision-making. Third, the present study extends the use of Multi-Response Racial Attitude Measure and the Similarity Task, used mainly in North American and European settings, to the Korean population. To the best of our knowledge, the author found only one Korean study that adopted Multi-Response Racial Attitude Measure (e.g., Jung & Oh, 2016) and none with the Similarity Task. The present study adds a variety to the measures in Korean literature on bias, while also extending the evidence base internationally. Fourth, given the focus on the Southeast Asian population in the educational policies regarding multicultural education, the racial targets in both tools were changed to Southeast Asians. The current study's analysis on diverse components of bias and children's rationale behind their judgment will offer a comprehensive understanding of children's perspectives toward Southeast Asians. By expanding the past studies to address the gaps in the literature, the study aimed to contribute to a growing body of literature on bias and inform educational policies of Korea.

3. Methodology

This chapter will present the study's research design and the methodological framework of the study. The aim of the study and research questions will be outlined, followed by a description of the research design. Descriptions of participants and the instruments used will then be presented and detailed research procedures from the recruitment to scoring will be explained. Finally, the issues of reliability, validity and ethics will be discussed.

3.1 Background and aim

The aim of the study was to explore the three domains of intergroup bias, namely racial attitudes, ethnic categorization, and cross-race peer relations. Specifically, the study investigated whether children: (a) show racial attitudes, (b) focus on racial features (e.g. skin colour) or non-racial features (e.g. hobby, language) when evaluating the similarity of peer dyads, (c) focus on racial features (e.g. skin colour) or non-racial features (e.g. hobby, language) when judging friendship potential of peer dyads. Past research in this area has examined children's bias on a choice-based paradigm in which they ask children to judge similarity and friendship potential about pairs of children from different racial background with no other salient features identified except for the difference in race. However, given that the children may not use race exclusively as the reason for making such decisions, this study aimed to offer a better understanding on children's racial intergroup bias by expanding investigation to include other sources of similarity, namely hobby and language.

3.2 Research questions

The research questions for this study are as follows:

1. Do children display racial attitudes based on the race of the target?
2. What traits do children focus on when evaluating the similarity of peer dyads?
    i. Do children focus on race or hobby when making similarity judgments?
    ii. Do children focus on race or language when making similarity judgments?
3. What traits do children focus on when judging the friendship potential of peer dyads?

i. Do children focus on race or hobby when making similarity judgments?

ii. Do children focus on race or language when making similarity judgments?

3.3 Research design

As this study was designed to compare children of two different age groups but took place at a single time point, the study employed a cross-sectional exploratory design. This design involved both within- and between-subject comparisons, as children's scores were not only compared across age groups but also across an individual child's judgments for different items in Multi-Response Racial Attitude Measure (MRA) and the Similarity Task (ST).

Further, a concurrent mixed-methods design was employed. Quantitative data and qualitative data were converged within the present study to generate a more accurate understanding of social phenomenon (Coe et al., 2017). Quantitative data was generated by the scores calculated from both MRA and ST, while responses to open-ended questions within ST were also examined thematically. This led to the triangulation of data, which was beneficial in two ways (Creswell, 2014). Firstly, it provided a better insight into the research questions regarding children's perceptions of similarity and friendship. Secondly, it helped address the limitations of previous research.

3.4 Participants

Overall data was collected from 82 participants. There were 41 first-graders (M = 6.92, SD = 0.27) including 20 females and 21 males. There were 41 third-graders (M = 9.02, SD = 0.33) including 20 females and 21 males. More information on the demographic of the participants are detailed in Table 1. Children's demographic information was collected from their parents via online survey hosted on the Qualtrics website. Participants were recruited from five different provinces of Korea. In general, the participants did not have much interracial contact experience nor did they have much cross-race friendship. Except for those who answered 'never' (n = 14) on the amount of interracial contact question, information on where they make the interracial interactions were also collected. Of those who have experience receiving multicultural education (n = 33), additional information on the years of multicultural education experience was also collected.

Table 1

Number (and Percentage) of Participants for Demographic and Interracial Contact Details

Variable	Category	Grade 1 (n=41)	Grade 3 (n=41)	Total (n=82)
Demographic details				
Gender	Male	21(51.2)	21(51.2)	42(51.2)
	Female	20(48.8)	20(48.8)	40(48.8)
Region	Gyeongsang	15(36.6)	22(53.7)	37(45.1)
	Gyeonggi	13(31.7)	10(24.4)	23(28.0)
	Jeju	6(14.6)	4(9.8)	10(12.2)
	Chungcheong	4(9.8)	3(7.3)	7(8.5)
	Seoul	3(7.3)	2(4.9)	5(6.1)
Interracial contact details				
Amount of contact with Southeast Asian	Never	8(19.5)	6(14.6)	14(17.1)
	Rarely	8(19.5)	3(7.3)	11(13.4)
	Sometimes	20(48.8)	25(61.0)	45(54.9)
	Often	5(12.2)	7(17.1)	12(14.6)
Place of contact with Southeast Asian[a] (n=68)	Media	17(51.5)	18(51.4)	35(51.5)
	Overseas travel	12(36.4)	17(48.6)	29(42.6)
	School: Friends	5(15.2)	4(11.4)	9(13.2)
	Others	4(12.1)	4(11.4)	8(11.8)
	Extracurricular institutions	3(9.1)	3(8.6)	6(8.8)
	Neighbor	2(6.1)	3(8.6)	5(7.4)
	Family	2(6.1)	2(5.7)	4(5.9)
	School: Teacher	1(3.0)	0(0.0)	1(1.5)
Number of Southeast Asian friends	None	34(82.9)	31(75.6)	65(79.3)
	One	6(14.6)	8(19.5)	14(17.1)
	Two	0(0.0)	2(4.9)	2(2.4)
	Three or more	1(2.4)	0(0.0)	1(1.2)
Amount of multicultural education	None	34(82.9)	15(36.6)	49(59.8)
	Once	5(12.2)	6(14.6)	11(13.4)
	Twice or more	2(4.9)	20(48.8)	22(26.8)
Year of multicultural education [a] (n=33)	2016	-	2(7.7)	2(6.1)
	2017	-	1(3.8)	1(3.0)
	2018	1(14.3)	7(26.9)	8(24.2)
	2019	3(42.9)	6(23.1)	9(27.3)
	2020	5(71.4)	14(53.8)	19(57.6)
	2021	1(14.3)	13(50.0)	14(42.4)

[a] Percentage do not sum to 100 as multiple answers are given.

3.5 Instruments

Children's racial attitudes were measured through a tool adapted from Doyle and Aboud's (1995) Multi-response Racial Attitude (MRA) while children's judgement on similarity and friendship potential were measured through a tool adapted from the Similarity Task (ST) developed by McGlothlin et al. (2005).

Though both instruments have found robust findings with children, some adaptations were made in the tools to ensure the tools' reliability with a new population and to address the limitations found in the past studies. In an attempt to address the methodological limitations of McGlothlin et al.'s (2005) work, additional parameters of hobby and language were added to the ST tool and children's justification of similarity and friendship judgments were recorded verbatim to thoroughly apprehend the emerged themes in their responses.

To ensure the reliability of the changes made, piloting was done with Korean children in the targeted age group. Overall, three attributes and three vignettes were replaced in MRA and the peer dyads in ST were newly drawn to reflect the changed traits and race (Appendix A). When redrawing the dyads in ST, the author tried to minimize the potential distractions in the drawing (e.g., clothes, body shape, facial expression) so that the child could focus on comparing the intended traits (i.e., hobby, language, race). To ensure the reliability of the changes made, piloting was done with Korean children in the targeted age group. More details on the description of the items and the changes will be addressed in the rest of the chapter and can be seen in Appendix B.

3.6 Pilot

As the measures used in the study was adapted from the studies mostly conducted in the Western context, it was necessary to carry out a pilot study in order to ensure that the tools functioned as intended to the Korean participants. Two pilot sessions were conducted with seven children. The first pilot involved two first graders and three third graders to check the following points: (a) whether the illustration of the items in each task was read consistently, (b) whether children showed fatigue with the total 36 items in the session (24 for MRA, 12 for ST), (c) the feasibility of delivering the tasks online. As some changes were made to reflect the findings from the first pilot, a second pilot was conducted

with one first grader to check whether the changes were accepted. The details on the process and the results of the pilot session are presented in Appendix A.

3.7 Procedures

3.7.1 Recruitment

Participants were recruited in five provinces of Korea. While the original plan was to go into two schools in Busan and Gyeonggi-do, the global pandemic made constraints in following the plan which left us with no choice but to change the study to online and to extend the recruitment sites by employing the snowballing technique. Given the pandemic, the researcher preferred not to make constraints on inclusion and exclusion criteria and thus adopted non-probabilistic sampling to recruit as much as possible. Therefore recruitment was made in two strains: within school and outside school.

Regarding the recruitment procedure within school, head teacher letters (Appendix C) providing details of the study were sent to head teachers of the two schools. Once initial consent had been obtained from the head teacher, information letter for parents (Appendix D) and the link for the online consent form and sociodemographic survey (Appendix E) were shared with the classroom teachers and were then uploaded on the parent-teacher communication platform. Only those who submitted the consent forms were recruited for the current study.

For individual recruitment, the information letter (Appendix D) and the link for online consent form and survey (Appendix E) were distributed to local parents' communities and to the personal networks of the researcher. Only those who submitted the consent forms were recruited.

Power calculations were carried out in order to determine the minimum sample size needed to reach the desired power of 0.95 and the effect size of 0.175 which was determined based on previous research in this topic (see e.g. McGlothlin et al., 2005). The minimum total sample size under these conditions was determined to be 56 (Faul et al., 2009). This study's final sample size, 82, was well above the minimum sample size to detect effects. However, the findings of the study may not be generalizable beyond the participants due to the use of non-probabilistic sampling as non-probabilistic sampling reduces the representativeness of the sample and thus results in low external validity (Fields, 2017). It should be noted, however, given the lack of accessibility and the timeframe involved in a

masters' level research project and a study during pandemic-related school closures, practicality had to be prioritized.

3.7.2 Data collection and scoring

The study was delivered online via Microsoft Teams, an online video-conferencing platform, and followed the guidelines of the University's Data Protection Assessment (see section 3.9). After an introduction on the researcher and the study, the researcher introduced Southeast Asian countries with a map. Although the Korean word for Southeast Asian, *Dongnam-Asia*, is a commonly used term in Korea, the researcher reminded the children about the term as the term was to be repeatedly used throughout the session. The session was done one to one and took around 30 minutes.

The online session consisted of two tasks: MRA and ST. The order of the two tasks was counter-balanced. Out of 82 participants, 40 participants began with ST, while 42 participants received MRA first. The tasks were delivered by sharing the researcher's computer screen of a Microsoft PowerPoint, and only the researcher could moderate the screen while the child gave verbal answers (Appendix F). Participants were told that there were no right or wrong answers and that all responses were confidential. In addition, they were informed that they may choose to stop at any time. A progress task bar was visualized on top of each slide to enhance the child's concentration span. Detailed procedures of each task are outlined below.

3.7.2.1 Multi-Response Racial Attitude Measure (MRA)

An overview of MRA

MRA measures children's attitudes toward different racial groups by asking a child to place 10 positive attributes and 10 negative attributes to each target race. While most of the attributes were taken from the original measure (Doyle & Aboud, 1995), three attributes 'polite' 'popular' 'gets angry easily' replaced the original words as the pilot session suggested some changes needed in Korean context (Appendix A). The positive attributes were clean, wonderful, healthy, good, polite, happy, popular, kind, helpful, and smart. The negative attributes were gets angry easily, mean, dirty, cruel, stupid, selfish, sick, naughty, won't let others play, and bad. In total there were 24 items in this task including the four

neutral filler attributes (likes to walk, likes to sing, likes T.V., likes music).

Procedure

As depicted in Figure 1, attributes were presented in vignettes that illustrated a behavioural example of the attribute to help the child's understanding. A set of two identical vignette cards for each item was presented on the screen (see Figure 2). The cards were to be distributed among three boxes: one empty box, one box labeled as belonging to a Korean child, and one to a Southeast Asian child. Korean box and Southeast Asian box were each identified by a same-sex colored head drawing that did not have any facial features and differed only in skin colours and hair style. The ethnicity of each drawing was verbally identified. Children were asked, "Some children are selfish. They like to keep things to themselves and they don't share. Who is selfish? Is it the Korean child, the Southeast Asian, no one, or both?" The researcher arranged the cards as per to the child's verbal response.

Figure 1

Example of Multi-Response Racial Attitude Measure Items

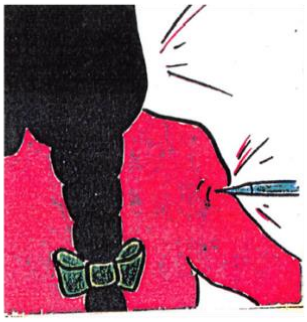
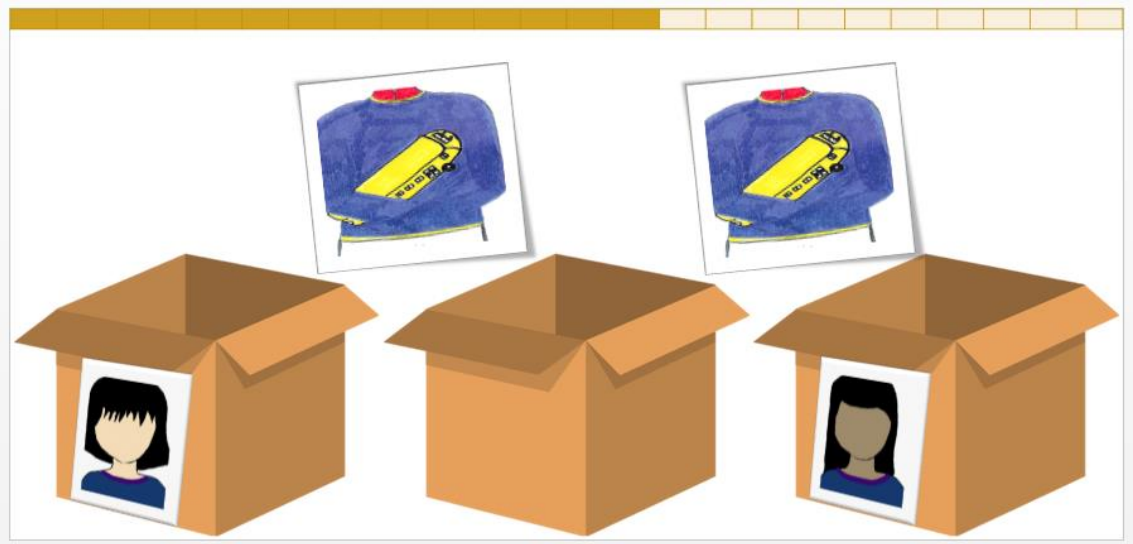
Positive Attributes	Negative Attributes	Filler Items
Smart	Mean	Likes to walk
		
Happy	Bad	Likes to sing
		

Figure 2

Screenshot of the 'Selfish' Attribute in Multi-Response Racial Attitude Measure



Before the actual task begins, children distributed non-evaluative picture card to ensure that the child understands how the distribution works (see details in Appendix F).

Scoring

The number of cards placed in each box was counted. Four scores were derived initially, the total number of positive attributes and the total number of negative attributes for each of the two racial groups, each with a possible range of 0–10. Then, composite scores were derived to represent prejudice score (sum of positive to Koreans and negative to Southeast Asians, range 0–20) and against-prejudice score (sum of negative to Koreans and positive to Southeast Asians, range 0–20).

3.7.2.2 Similarity Task (ST)

An overview of ST

ST measured the relative importance of racial features in children's similarity and friendship potential judgment when multiple sources of similarity are presented. ST consisted of two sets. The first set measured the importance of race versus hobby and the second set measured the importance of race versus language. Children made judgements about 12 pairs of peer dyads. As seen in Figure 3, the six dyads in the first set were combinations of three race conditions (Korean-Korean; Southeast Asian-Southeast Asian; Korean-Southeast Asian) and two hobby conditions (same; different). Likewise, the remaining six dyad in the second set were combinations of three race conditions (Korean-Korean;

Southeast Asian-Southeast Asian; Korean-Southeast Asian) and two language conditions (same; different) (see Figure 4). All had identical dress and facial expression and was of same-sex as the participant. Moreover, the popularity and commonality of the names of the peers were also controlled for the Korean dyads to avoid judgments based on names. The full sets of materials can be seen in Appendix B.

Figure 3

Example of Dyads in the First Set of Similarity Task (Male version)

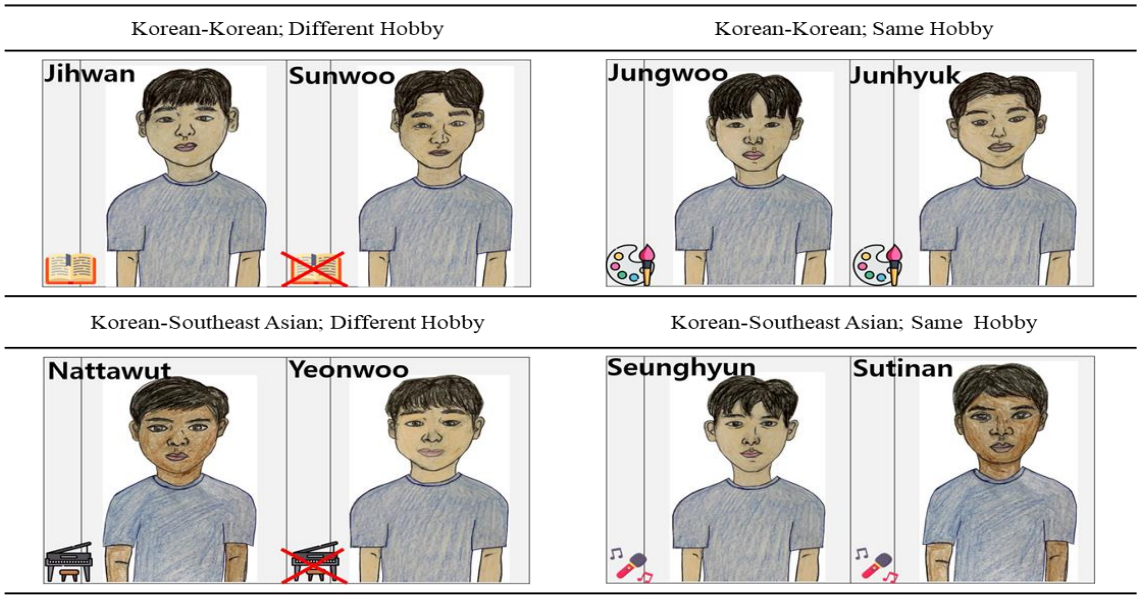
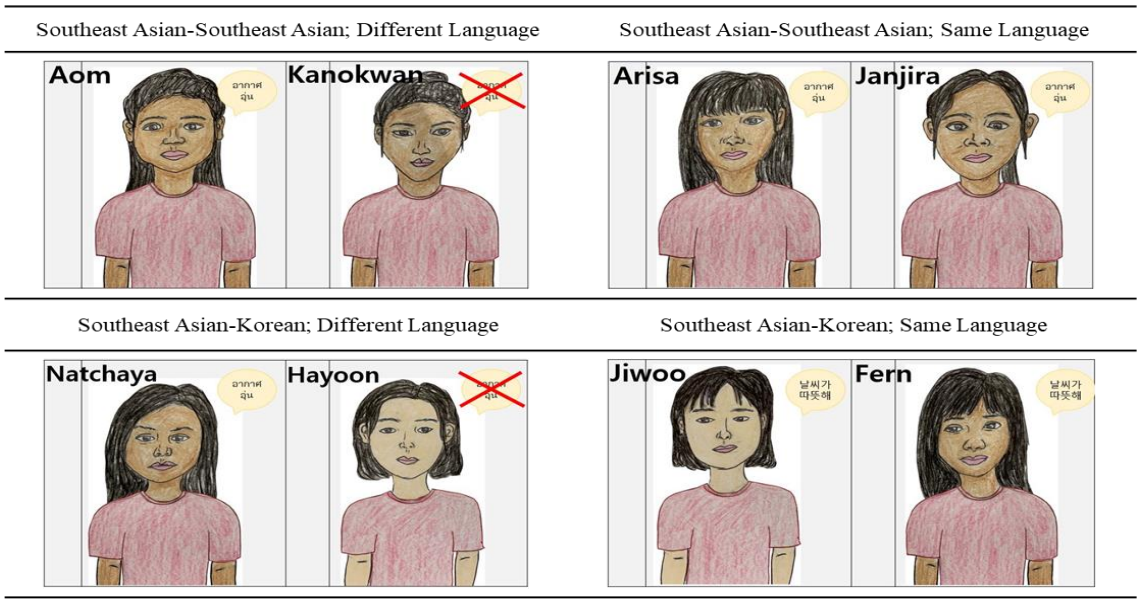


Figure 4

Example of Dyads in the Second Set of Similarity Task (Female version)



Procedure

The pairs were presented one by one on the screen. In the first set, six pairs of dyads varying by race and hobby conditions were presented. Upon presenting the picture cards, the interviewer told the names of the peers and whether or not they share hobbies. For example, the introduction for the Korean pair who do not share same hobby was, “Here is a picture of Jihwan and Sunwoo. Jihwan likes to read but Sunwoo does not like to read”. Participants were then asked four questions regarding similarity and friendship potential judgments: (1) How much alike are X and Y? (2) Why do you think X and Y are alike/not alike? (3) How likely do you think X and Y are friends? (4) Why do you think X and Y are friends/not friends?

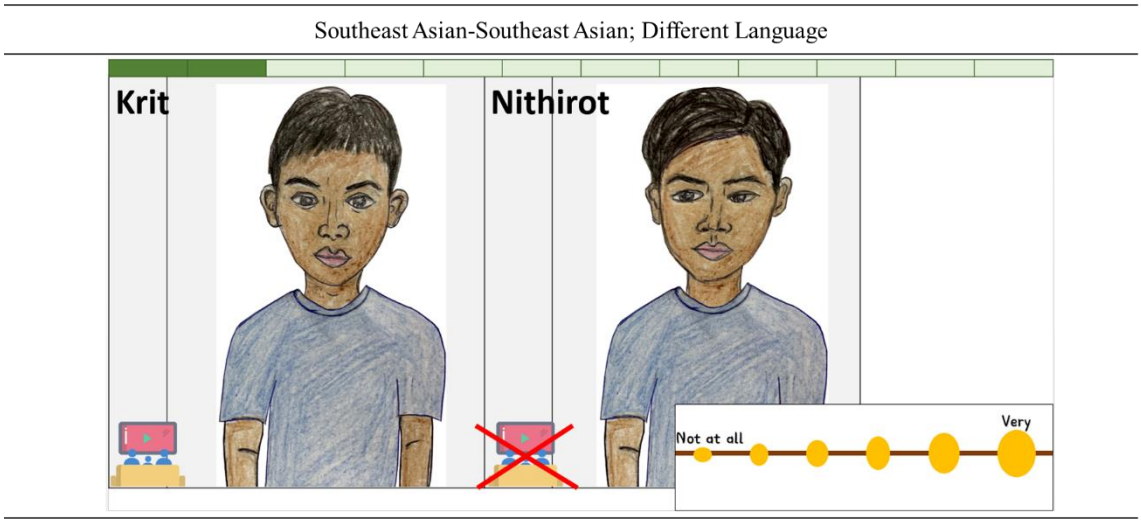
In the second set, children were presented with six dyads again. Similarly, the introduction for the Southeast Asian pair who speaks same language was, “Here is a picture of Aom and Kanokwan. Aom and Kanokwan both speak Thai”. The same four questions regarding similarity and friendship potential judgments were asked. The ways in which their responses were coded are explained in the next section.

Scoring

Four questions were asked to measure the similarity and the friendship potential between the peer dyads. Two questions assessed similarity between the peers. The first question, *similarity ratings*, asked participants to rate the similarity of the two peers on a 6-point Likert scale (1 = *not at all*, 6 = *very*). Given the age group, different degree of each points were visualized with different sizes of each point (Figure 5). The point of the left end was labeled ‘not at all’ with the smallest size of a circle, the points gradually grew bigger towards the right, and the point of the right end was labeled ‘very’ with the biggest size of a circle. To help children engage, the researcher moved the cursor back and forth between the points and asked the child to say “stop” at the point they want. The second question, *similarity reasons*, asked children reasons for why the two peers are alike or not alike. Responses to this open-ended question were recorded verbatim.

Figure 5

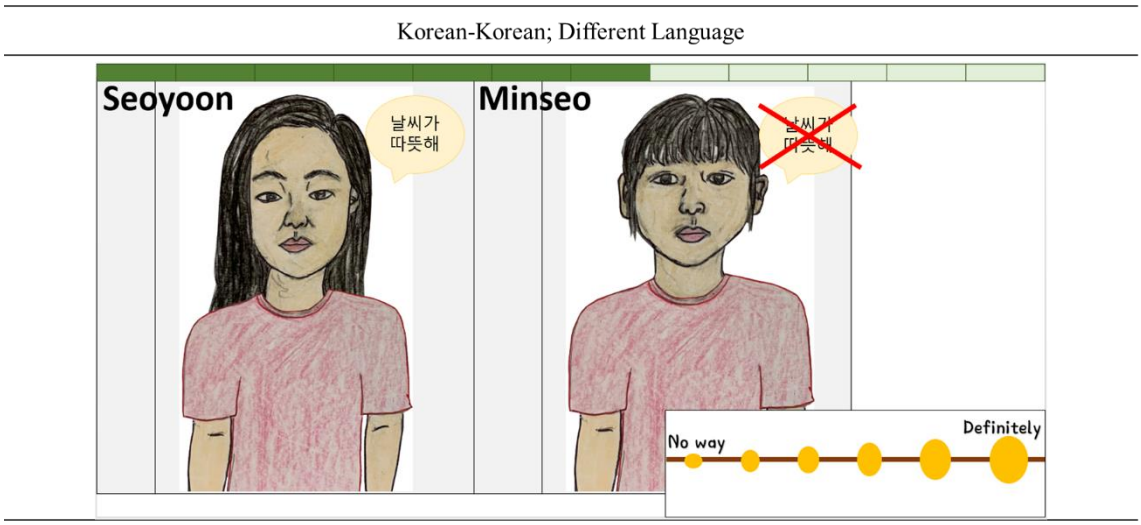
Screenshot of the Similarity Ratings Question in the First Set of Similarity Task



The next two questions assessed children's evaluations of friendship potential between the peers. The third question, *friendship potential ratings*, asked participants if the two peers were likely to be friends using the same 6-point scale used in the similarity ratings scale. Again, only the points on both ends had labels (1= *no way*, 6 = *definitely*) (Figure 6). The fourth question, *friendship potential reasons*, asked participants their reasons for their judgement. Responses were recorded verbatim.

Figure 6

Screenshot of the Friendship Potential Question in the Second Set of Similarity Task



3.8 Validity and Reliability

The psychometric properties of validity and reliability are important conditions of measurements to examine the accuracy and generalizability of the findings. While the psychometrics of the two instruments used in the current study have already been examined in the past studies, it is crucial for the researcher to ensure the same applies to the new context.

3.8.1 Validity

Validity refers to whether a tool measures what it intends to measure (Field, 2017). In other words, validity involves being faithful to the underpinning assumptions of the instruments used (Cohen et al., 2017).

In order to demonstrate content validity, an indicator which ensures that an individual item reflects the main construct (Field, 2017), piloting was essential. Pilot sessions ensured that all of the items were relevant to the main construct and easy to understand. In particular, dyads depicted in ST were carefully drawn for this study, controlling for other distractors and the new drawings in MRA referred to the original images to have a consistent style of drawing. Past studies have also established validity of the MRA. Construct validity was also considered by identifying main constructs through theoretical literature and by adapting existing measures of racial bias and similarity perceptions from past empirical literature (e.g., Doyle & Aboud, 1995). Aboud (2003) reported convergent validity by comparing MRA with Bigler et al.'s (2001) attitudes measure, in which the assessment takes a different response form from the child asking them to decide how many children from each racial group, presented separately, have an evaluative trait.

However, ecological validity was low particularly in ST because in real life much more information is available to make judgment about peers. Although the current study tried to reflect realistic characteristics of children in the drawings, such as variation in hair style, facial features of the drawings, and giving realistic names to the targets, those variations were limited to a minimum level to maintain children's focus on information explicitly relevant to the three constructs under study: hobby, skin colour, and language.

3.8.2 Reliability

Reliability indicates whether a method could consistently produce same findings when applied in different settings (Field, 2017). Therefore, instrument with high reliability ensures consistency and replicability over time and over instruments (Cohen et al., 2017). In order to enhance the reliability of this study, the study followed a standardized study protocol (Appendix X) and before each session began, the researcher purposely asked the caregivers to isolate the child from other distractors such as TV noise, siblings, or even parent engagement during the task. Moreover, to ensure the applicability of the two instruments, including whether the child could relate to the pictures used in the task or showed fatigue during the session, piloting was essential. Through piloting, necessary changes were made such as adding a progression band on each slide to enhance children's concentration span and replacing some pictures in MRA to a more familiar image to Koreans (Appendix A).

Internal consistency (Cronbach's coefficient alpha) of MRA, which is a degree to which items of the scale are all measuring the same underlying attribute (Pallant, 2016), was demonstrated in the original study of Doyle and Aboud (1995), as the ratings varied from .79 to .91. Aboud (2003) once again reported high internal consistency, which varied from .79 to .90. Furthermore in the same study, test-retest reliabilities after a 2-week interval for an independent sample of children from four to seven years were: r (22) = .48 for positive White, .66 for negative White, .68 for positive Black, and .71 for negative Black (cited in Aboud, 2003, p. 49).

3.9 Ethics

Ethical considerations are a key part of carrying out research, and even more central to the discussion of research with human participants (Coe et al., 2017). Accordingly, the present study adhered to British

Educational Research Association Ethical Guidelines for Educational Research (2018) and the British Psychological Society's Code of Ethics and Conduct (2018). Furthermore, as this study collected data online, the study complied with the British Psychological Society's Ethics Guidelines for Internet-mediated Research (2021). In addition, Data Protection Impact Assessment (DPIA) screening concluded that the study procedure is unlikely to result in a high risk to participants and was approved

by the University's Data Protection Assessment (DPA) (Appendix H). The present study was approved by the Central University Research Ethics Committee (CUREC) (Appendix H).

As stated in section 3.7.1, consents from parents and children were obtained online through the online survey form, Qualtrics (Appendix E). Before seeking for consents, information sheet for parents and a child-friendly version for children were provided on the first page of the survey (Appendix D). The researcher gave brief introduction to every participant before the session began and verbal assent from each child was obtained once again at the beginning of the session. Parents were also informed that they would receive a summary report of the research outcome once data had been analysed.

4. Results

In this chapter the research questions will be restated followed by the analysis strategy to answer those questions. The outcomes of the preliminary analyses for both the quantitative and qualitative data will be discussed. Each research question will then be addressed through the quantitative and qualitative results.

4.1 Research questions

This study investigated three main research questions:

1. Do children display racial attitudes based on the race of the target?
2. What traits do children focus on when evaluating the similarity of peer dyads?
    i. Do children focus on race or hobby when making similarity judgments?
    ii. Do children focus on race or language when making similarity judgments?
3. What traits do children focus on when judging the friendship potential of peer dyads?
    i. Do children focus on race or hobby when judging friendship potential?
    ii. Do children focus on race or language when judging friendship potential?

4.2 Analysis strategy

Research questions were addressed by conducting repeated-measures ANOVA and thematic analysis. Given the within-subject design of the study, in which same participants took all the tasks, and to examine the effect of race in children's explicit racial attitudes and their judgment of similarity and friendship potential, a repeated-measures ANOVA was deemed appropriate (Pallant, 2016). Order effects were also examined through independent t-test.

On the other hand, to comprehensively understand the features children attend to when making similarity and friendship potential judgment, a thematic analysis was conducted regarding the two open-ended questions in ST: similarity reasons and potential friendship reasons. Thematic analysis is a "method for identifying, analyzing and reporting patterns (themes) within data" (Braun & Clark, 2006,

p. 79). The six steps of thematic analysis outlined by Braun and Clark (2006) were followed (see Figure 7). After familiarizing with the data, the researcher searched for, reviewed, and organized the themes within children's responses. The coding scheme and details of the coding procedure are presented later in the chapter (see section 4.4.3). Employing thematic analysis helped identify a range of themes in children's responses that go beyond the traits of race, hobby, and language. To ensure reliability of the coding process, a second judge analysed 20% of the data. A high Cohen's kappa was achieved ($\kappa = .97$), indicating very good inter-rater reliability (Pallant, 2016).

Figure 7

Steps of Thematic Analysis (Adapted from Braun & Clarke, 2006, p.87)

4.3 Preliminary analyses

4.3.1 Descriptive statistics

Table 2 presents the means and standard deviations of the scores derived from the two tasks. Regarding the MRA task, six scores were derived: four positive and negative scores for each racial target and two composite scores called prejudice score (sum of Korean positive and Southeast Asian negative scores) and against-prejudice score (sum of Southeast Asian and Korean negative scores). For ST, similarity and friendship potential scores for each combination of dyads were calculated separately (i.e., race with hobby and race with language)

Table 2

Mean and SD for Multi-Response Racial Attitude Measure (MRA) and Similarity Task (ST) Scores of Participants

Variables		Mean	SD	Range
MRA				
K Positive		9.39	1.04	0–10
S Positive		7.30	2.95	
K Negative		1.62	2.12	
S Negative		2.30	2.56	
Prejudice		11.70	2.79	0–20
Against-prejudice		8.93	3.81	
ST				
Similarity (race with hobby)	KKDH	3.22	1.34	1–6
	SSDH	3.73	1.58	
	SKDH	3.04	1.25	
	KKSH	4.70	1.17	
	SSSH	5.00	1.20	
	KSSH	4.11	1.61	
Similarity (race with language)	KKDL	2.88	1.46	
	SSDL	3.16	1.42	
	SKDL	2.95	1.49	
	KKSL	4.99	1.32	
	SSSL	5.18	0.94	
	KSSL	4.40	1.33	
Friendship (race with hobby)	KKDH	4.99	1.06	
	SSDH	4.44	1.46	
	SKDH	3.99	1.59	
	KKSH	5.01	1.15	
	SSSH	5.17	1.15	
	KSSH	4.74	1.49	
Friendship (race with language)	KKDL	3.68	1.70	
	SSDL	3.89	1.56	
	SKDL	3.73	1.63	
	KKSL	5.09	1.24	
	SSSL	5.30	1.04	
	KSSL	5.22	1.07	

Note. K = Korean, S = Southeast Asian, DH = Different Hobby, SH = Same Hobby, DL = Different Language, SL = Same Language.

4.3.2 Assumptions for parametric tests

Parametric tests such as ANOVA have two main assumptions: normal distribution and homogeneity of variance (Field, 2017). Therefore, before analyzing these data with parametric tests, it is crucial to first ensure that the data meet the assumptions of these tests.

Normality has been tested using the Kolmogorov-Smirnov test and through an examination of skewness and kurtosis statistics. Results from the Kolmogorov-Smirnov test indicated that all score data in the two tasks significantly deviated from normality (Appendix H). On the other hand, examination of skewness and kurtosis indicated normality in data. Although in theory, the value of skewness and kurtosis must be 0 to demonstrate perfect normality of data, this is rather uncommon in the social sciences (Pallant, 2016). Instead, many researchers suggest rules of thumb in interpreting normality through skewness and kurtosis. Along with the suggestion of Curran et al. (1996), more researchers nowadays argued that data is considered to show moderate normality if skewness is between -2 and +2 and kurtosis is between -7 and +7 (Bryne, 2010; Hair et al., 2010; Kline, 2011). In this study, all items except for K Positive score, were within the moderate normality thresholds of 2.0 and 7.0 for skewness and kurtosis respectively (Appendix H). Even for the K Positive variable, when used square-root transformation, the value was within the normality threshold, indicating that all score data are within the normal distribution range as suggested.

Mauchly's test indicated that the assumption of sphericity was not violated, demonstrating that variances in similarity and friendship judgment did not differ significantly between the two age groups on all items combined with different conditions of race and non-racial attributes (Appendix H). As the two fundamental assumptions were met, parametric tests such as repeated-measures ANOVA were used to make further analysis.

4.3.3 Coding scheme for the thematic analysis

In accordance with Braun and Clarke's (2006) suggested steps on thematic analysis (Figure 7), initial codes were derived from children's responses first. In the process, mixed responses which include both traits of similarity and difference in perceptions of similarity questions (e.g., their skin colours are different but they are wearing same t-shirts) and friendship questions (e.g., they can be friends because

though they have different hairstyle, they both like riding bikes) were noted. The mixed answers could not be categorized with the rest of the responses as they were not binary (similar/different). Therefore a separate scheme dealing with the nuance in those mixed answers were needed. However, given the sparsity of those answers (about 10% of the data) and the limited time, conducting a rigorous analysis for the mixed answers was not feasible and therefore those answers were excluded from the main analysis. Though they were removed in this study, examining those responses will be meaningful in future studies as considering both the similarity and difference in their judgment may indicate children's developmental sophistication.

Initial codes were then collated into themes. The final thematic framework included six main themes for the similarity question and two main themes for the friendship question (Table 3). The details of the thematic framework including the codes under each theme will be described in the later section (see section 4.5.3.3, 4.5.4.3) and the codebook with examples of responses under the themes can be found in Appendix I.

Table 3

Themes and Frequencies of Each Theme in Similarity and Friendship Potential Judgment

Theme	How many participants discussed it	How many times it was discussed across all participants
Theme on similarity judgment		
Racial features	69	307
Physical features (non-racial)	67	381
Language	65	222
Hobby	62	207
Individual characteristics	23	49
Focus on group membership	12	22
Theme on friendship potential judgment		
Similar traits	82	635
Dissimilar traits	80	356

4.4 Main Analyses

4.4.1 Order effect findings

Before running repeated-measures ANOVA relevant to each research question, an order effect was examined by conducting independent t-test. In the study, 42 participants took MRA first then ST

(order A) and 40 participants received ST first then MRA (order B). Only the scores that reported significant difference are presented here in Table 4, while the full table with all variables can be found in Table J1. Though the majority of the scores did not report an order effect, four scores were significantly higher in order A than in order B: Against-prejudice, Friendship KKDH(Korean-Korean, Different Hobby), Friendship KKSH(Korean-Korean, Same Hobby), Friendship KKSL(Korean-Korean, Same Language). Accordingly, the scores for against-prejudice and friendship were also analysed separately by each order (Appendix J). Details of the differences by order are described in section 4.4.2.3, 4.4.4.1, 4.4.4.2.

Table 4

T-Test Results Comparing Scores of Multi-Response Racial Attitude Measure and Similarity Task by Order A and B

Variables		Order A (n=42)		Order B (n=40)		t	p	Range
		Mean	SD	Mean	SD			
MRA								
Against-prejudice		9.79	3.78	8.03	3.68	2.14*	.036	0-20
ST								
Friendship (race with hobby)	KKDH	5.21	0.92	4.75	1.15	2.02*	.047	0-6
	SSDH	4.60	1.29	4.28	1.62	0.99	.323	
	SKDH	4.26	1.58	3.70	1.57	1.61	.110	
	KKSH	5.31	0.92	4.70	1.29	2.46*	.017	
	SSSH	5.36	0.91	4.98	1.35	1.51	.134	
	KSSH	4.98	1.37	4.50	1.59	1.46	.149	
Friendship (race with language)	KKDL	3.86	1.69	3.50	1.71	0.95	.344	
	SSDL	3.93	1.66	3.85	1.48	0.23	.822	
	SKDL	3.98	1.70	3.48	1.54	1.40	.166	
	KKSL	5.36	1.19	4.80	1.24	2.08*	.041	
	SSSL	5.33	1.18	5.28	0.88	0.25	.801	
	KSSL	5.33	1.05	5.10	1.08	0.99	.325	

* p<.05.

Note. K = Korean, S = Southeast Asian, DH = Different Hobby, SH = Same Hobby, DL = Different Language, SL = Same Language.

4.4.2 RQ 1: Do children display racial attitudes based on the race of the target?

To investigate children's racial attitudes towards different racial groups, repeated-measures

ANOVA was conducted separately for positive and negative scores. In each analysis, scores for each racial target were compared as repeated-measures while the grades were submitted as between subjects. Furthermore, to examine children's prejudice attitudes and against-prejudice attitudes by grade, these composite scores were submitted to independent t-test.

4.4.2.1 MRA positive scores

As presented in Table 5, ANOVA revealed significant main effects for race, $F(1, 80)=50.66$, $p < .001$, and grade, $F(1,80) = 4.21$, $p = .044$, while RacexGrade interaction did not show significance.

Table 5

ANOVA Results on the Effects of Race and Grade on Positive Scores

Source	SS	df	MS	F	p
Race	4625.86	1	4625.86	50.66***	.000
Grade	582.20	1	582.20	4.21*	.044
Race×Grade	208.69	1	208.69	2.29	.135
Error(Race)	7304.95	80	91.31		
Error(Grade)	11075.44	80	138.44		

* p<.05, *** p<.001.

As the main effect of race indicates, children attributed more positive traits to Koreans (M = 9.39) compared to Southeast Asians (M = 7.30) (see Table 6). Moreover, third graders (M = 8.37) attributed more positive traits to Southeast Asians than the first graders (M = 6.24).

Table 6

Means and SD for Positive Scores in Multi-Response Racial Attitude Measure

Grade	Positive K		Positive S		Range
	M	SD	M	SD	
1	9.27	1.28	6.24	3.43	0-10
3	9.51	0.71	8.37	1.88	
Total	9.39	1.04	7.30	2.95	

Note. K = Korean, S = Southeast Asian.

4.4.2.2 MRA negative scores

There was a significant main effect for race on children's negative scores, $F(1, 80) = 5.46$, $p = .022$(see Table 7). No significant main effect for grade, nor interaction effect between race and grade were found.

Table 7

ANOVA Results on the Effects of Race and Grade on Negative Scores

Source	SS	df	MS	F	p
Race	19.12	1	19.12	5.46*	.022
Grade	2.44	1	2.44	0.32	.571
Race×Grade	10.76	1	10.76	3.07	.083
Error(Race)	280.12	80	3.50		
Error(Grade)	601.34	80	7.52		

* p<.05.

The race main effect indicates that children attributed more negative traits to the Southeast Asian target ($M = 2.30$) than the Korean targets ($M = 1.62$) as presented in Table 8.

Table 8

Means and SD for Negative Scores in Multi-Response Racial Attitude Measure

Grade	Negative K		Negative S		Range
	M	SD	M	SD	
1	1.24	1.98	2.44	2.89	0-10
3	2.00	2.21	2.17	2.20	
Total	1.62	2.12	2.30	2.56	

Note. K = Korean, S = Southeast Asian.

4.4.2.3 MRA composite scores

MRA composite scores—prejudice (sum of positive Korean and negative Southeast Asia scores) and against-prejudice (sum of positive Southeast Asia and negative Korean scores) —were submitted to independent t-test to compare the score differences by grades (see Table 9). The prejudice score between grades was not significantly different, whereas the against-prejudice score between grades was significant. Against-prejudice score was significantly higher in third grade ($M = 10.37$, $SD = 2.84$) than

first grade (M = 7.29, SD = 4.14); $t(80)$ = -.367, p < .001. Further, as mentioned above (see section 4.4.1), against-prejudice scores revealed an order effect. Therefore, the against-prejudice score within each order was also analysed separately but there was no change in the pattern of the results (Appendix J).

Table 9

T-Test Results Comparing Scores of Prejudice and Against-prejudice by Grades

Score type	Grade	n	M	SD	t	p
Prejudice	1	41	11.71	3.20	0.04	.969
	3	41	11.68	2.35		
Against-prejudice	1	41	7.49	4.14	-3.67***	.000
	3	41	10.37	2.84		

*** p<.001

Note. Possible range 0 to 20

4.4.3 RQ 2: What traits do children focus on when evaluating the similarity of peer dyads?

To examine the traits that children focus on when judging the similarity of peer dyads, the ST measured children's similarity score under two conditions: first with race and hobby traits of the presented peer dyads, and second with race and language traits. Furthermore, to thoroughly investigate the justification children used for their decision, a thematic analysis was conducted.

4.4.3.1 Do children focus on race or hobby when making similarity judgments?

A 2 (grade of participant)x3 (race of peer dyad: cross-race, Korean, Southeast Asian)x2 (hobby: same, different) ANOVA with repeated-measures on the last two factors was conducted on the similarity score. This ANOVA revealed significant main effects for hobby, $F(1, 80) = 65.70$, $p < .001$, race, $F(2, 160) = 18.92$, $p < .001$, and grade, $F(1, 80) = 8.21$, $p < .01$. There was no significant interaction between the variables (see Table 10).

Table 10

ANOVA Results on the Effects of Hobby, Race, and Grade on Similarity Score

Source	SS	df	MS	F	p
Hobby	199.12	1	199.12	65.70***	.000
Race	51.54	2	25.77	18.92***	.000
Grade	23.27	1	23.27	8.21**	.005
Hobby×Grade	10.25	1	10.25	3.38	.070
Race×Grade	3.54	2	1.77	1.30	.275
Hobby×Race	3.32	2	1.66	1.41	.247
Hobby×Race×Grade	0.25	2	0.12	0.11	.900
Error(Hobby)	242.46	80	3.03		
Error(Race)	217.92	160	1.36		
Error(Hobby×Race)	188.10	160	1.18		
Error(Grade)	226.64	80	2.83		

** p<.01, *** p<.001.

The results indicate that children do not solely focus on race nor hobby. As presented in Table 11, peer dyads with same hobby rather than different hobby received higher similarity scores. Meanwhile, Southeast Asians were judged to be the most similar, followed by Koreans while the cross-race dyads were the least similar. Despite the effect of race in the same hobby condition, children judged the cross-race with same hobby (M = 4.11) more alike than same-race Korean dyads with different hobby (KKDH: M = 3.22, SSDH: M = 3.73), indicating that children focused more on hobby than race. Regarding grade, third graders' similarity scores were higher than first graders' scores besides the score for the cross-race dyad with same hobby (KSSH).

Table 11

Means and SD for Similarity Scores of Different Dyads in Race with Hobby condition

Variable		Grade 1		Grade 3		Total		Range
		M	SD	M	SD	M	SD	
Similarity	KKDH	2.88	1.54	3.56	1.03	3.22	1.34	1-6
	SSDH	3.24	1.71	4.22	1.27	3.73	1.58	
	SKDH	2.78	1.33	3.29	1.12	3.04	1.25	
	KKSH	4.59	1.34	4.80	0.98	4.70	1.17	
	SSSH	4.85	1.26	5.15	1.13	5.00	1.20	
	KSSH	4.15	1.74	4.07	1.49	4.11	1.61	

Note. K = Korean, S = Southeast Asian, DH = Different Hobby, SH = Same Hobby.

4.4.3.2 Do children focus on race or language when making similarity judgments?

A 2 (grade of participant)x3 (race of peer dyad: cross-race, Korean, Southeast Asian)x2 (language: same, different) ANOVA with repeated-measures on the last two factors was conducted on the similarity score. This ANOVA showed significant main effects for language, $F(1, 80) = 137.76$, $p < .001$, race, $F(2, 160) = 8.80$, $p < .001$, and grade, $F(1, 80) = 4.47$, $p = .038$. Moreover, a significant racexgrade interaction, $F(2, 160) = 3.70$, $p = .027$, and a significant languagexrace interaction, $F(2, 160) = 7.78$, $p = .001$), were found (see Table 12).

Table 12

ANOVA Results on the Effects of Language, Race, and Grade on Similarity Score

Source	SS	df	MS	F	p
Language	426.35	1	426.35	137.76***	.000
Race	20.01	2	10.01	8.80***	.000
Grade	17.20	1	17.20	4.47*	.038
Language×Grade	0.40	1	0.40	0.13	.721
Race×Grade	8.42	2	4.21	3.70*	.027
Language×Race	10.52	2	5.26	7.78**	.001
Language×Race×Grade	1.00	2	0.50	0.74	.477
Error(Language)	247.59	80	3.09		

Error(Race)	181.90	160	1.14
Error(Language×Race)	108.15	160	0.68
Error(Grade)	307.83	80	3.85

* p<.05, ** p<.01, *** p<.001.

The results indicate that children pay attention to both race and language. As presented in Table 13, peer dyads with same language were considered more similar than peer dyads with different language. Regardless of language, the racial make-up of the peer dyad affected children's similarity scores. Children judged Southeast Asian pairs more similar and cross-race pairs less similar.

Again, despite the difference by race in the same language condition, children judged the cross-race with same language (KSSL: *M* = 4.40) more similar than same-race dyads with different language (KKDL: *M* = 2.88, SSDL: *M* = 3.16), indicating that language was more important than race in their similarity judgment. Regarding grade, third graders' similarity scores were higher than first graders' scores besides the score for the cross-race dyad speaking different language (SKDL).

Table 13

Means and SD for Similarity Scores of Different Dyads in Race with Language Condition

Variable		Grade 1		Grade 3		Total		Range
		M	SD	M	SD	M	SD	
Similarity	KKDL	2.49	1.38	3.27	1.45	2.88	1.46	1-6
	SSDL	2.88	1.60	3.44	1.16	3.16	1.42	
	SKDL	2.98	1.52	2.93	1.47	2.95	1.49	
	KKSL	4.76	1.34	5.22	1.27	4.99	1.32	
	SSSL	4.98	1.11	5.39	0.70	5.18	0.94	
	KSSL	4.37	1.44	4.44	1.23	4.40	1.33	

Note. K = Korean, S = Southeast Asian, DL = Different Language, SL = Same Language.

Regarding the findings on the interaction between variables, first graders and third graders differed in how they rated peer dyads of different racial make-up. As presented in Figure 8, while the

first graders' similarity ratings did not differ much among racial groups, third graders similarity scores for same-race dyads were much higher than cross-race dyads. Further, languagexrace interaction once again confirmed the findings that children use both racial and non-racial information for their similarity judgments (see Figure 9).

Figure 8

Interaction Effect Between Participants' Grade and Racial Target on Similarity Scores

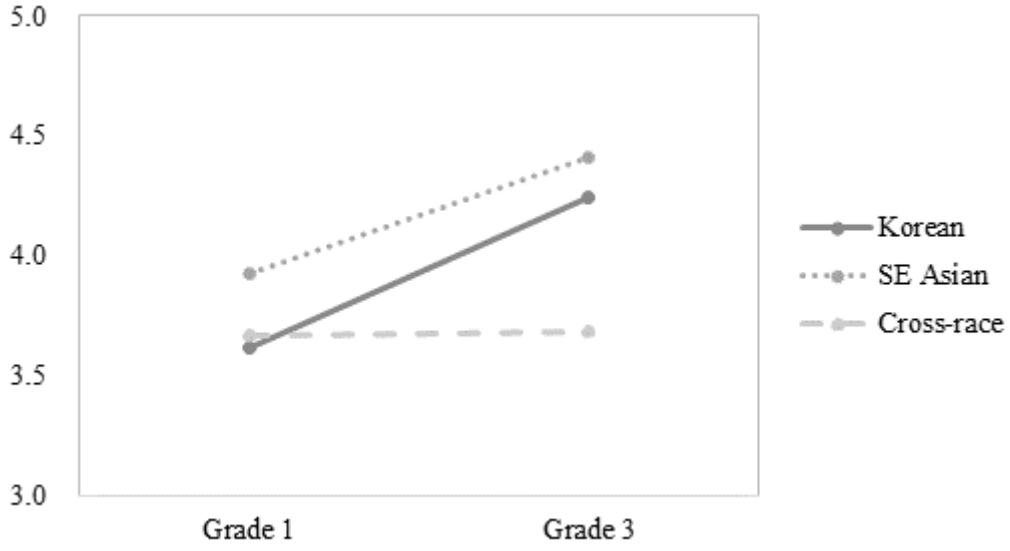
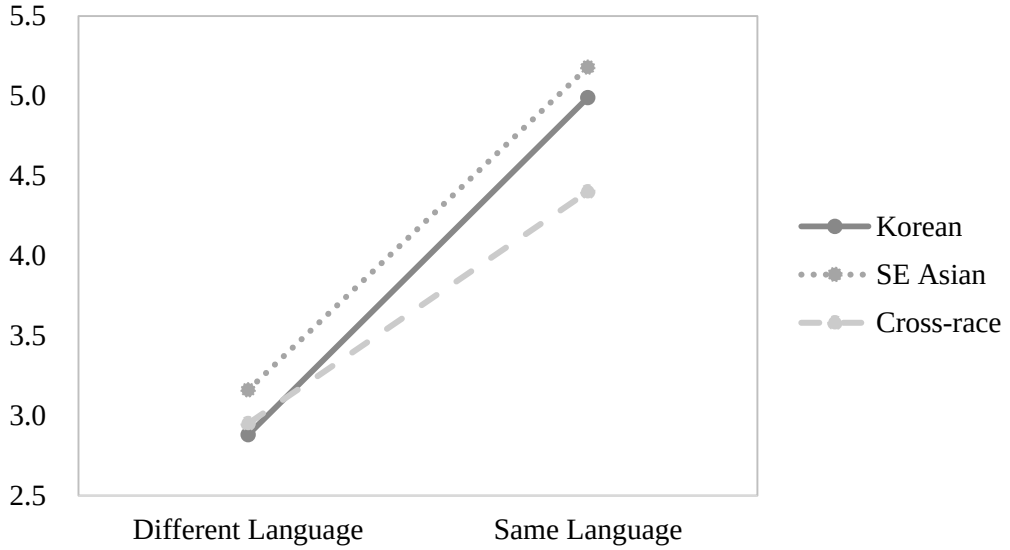


Figure 9

Interaction Effect Between Language and Race on Similarity Scores



4.4.3.3 Thematic analysis on children's justification of similarity judgment

Through thematic analysis, frequently mentioned themes were extracted from the children's responses to the question "Why do you think they are similar?" Overall, a majority of children worked with more than one parameters in their judgment (e.g., "their eyes look similar and they both speak Korean") and this explains why the sum of themes discussed are higher than the number of study participants. As shown in Table 14, children's responses were grouped into six main themes. The following section elaborates more on each theme.

Table 14

Themes and Frequencies of Each Theme in Participants' Justification of Similarity Judgment

Theme	How many participants discussed it	How many times it was discussed across all participants
Racial features	69	307
Physical features (non-racial)	67	381
Language	65	222
Hobby	62	207
Individual characteristics	23	49
Focus on group membership	12	22

Racial features

Whenever a child referred to race or skin colour in their responses, they were coded respectively and later combined into the racial features theme (see Table 15). The racial features theme was discussed the most as 84% of children (69 out of 82) discussed this theme. The high percentage of participants discussing this theme indicates that racial features are certainly a salient cue in children's eyes when judging similarity.

Table 15

Racial Features Theme: Associated Codes, Number of Participants per Theme and Code, and Extracts of Responses

Theme and associated codes	Number of participants	Extracts of responses
Racial features	69	
Skin colour	59	"They are similar because their face colours are the same."
Race and nationality	31	"They both speak Korean and I think they are from Korea."

Physical features

Another salient feature was physical features, with 82% of children (67 out of 82) discussing this trait (see Table 16). The physical features theme was a collation of two codes, particularly because an unexpected number of children based their judgment on the clothes the dyads were wearing despite the fact that all dyads were wearing same clothes. Regarding the appearance code, children gave a wide arrange of answers while some focused on the details such as "their eyebrows look different".

Table 16

Physical Features Theme: Associated Codes, Number of Participants per Theme and Code, and Extracts of Responses

Theme and associated codes	Number of participants	Extracts of responses
Physical features (non-racial)	67	
Appearance	67	"They are very different because their hairstyle is completely different. Also the look on their face is a bit different."
Clothes	32	"They are wearing same clothes. So they are similar."

Language and Hobby

Regarding the language theme, 79% of children discussed this topic (see Table 17). As the dyads were presented in two different language conditions, same or different, children made note of those conditions and focused on whether the dyads could communicate or not in their similarity judgment.

Less paid attention to hobby than language. Hobby was also presented in two different conditions, same or different, leading the child to vary their similarity judgment based on those conditions.

Table 17

Language and Hobby Theme: Number of Participants per Theme and Code, and Extracts of Responses

Theme and associated codes	Number of participants	Extracts of responses
Language	65	"They are similar because they both speak Thai" "They speak different languages so they can't communicate."
Hobby	62	"One likes to sing but the other does not." "They both like to ride bikes and they look like Koreans."

Individual characteristics

Three codes of name, personality, and gender were grouped together under the individual characteristics theme. Though only 28% of the participants discussed this theme, the pattern found within the name code is noteworthy. Of 11 children who referred to the dyads' names as the basis of their judgment, seven of them were first graders. In particular, only first graders focused on each consonant and vowel of the names as demonstrated in the example extracts in Table 18. One possible explanations for this specific focus is that children spend much time learning Korean letters in first grade. In fact, some first graders were excited to read out the names written on the screen even though the researcher did not ask them to do so during the sessions. This suggests that children apply their personal knowledge in their decision-making, which may also mean that teaching a wide range of cross-cutting knowledge between racial groups can steer the child to focus on multiple categories rather than mere race when judging the similarity.

Table 18

Individual Characteristics Theme: Associated Codes, Number of Participants per Theme and Code, and Extracts of Responses

Theme and associated codes	Number of participants	Extracts of responses
Individual characteristics	23	
Name	11	"They both have 'r' sound in their names."
Personality	10	"Sarawut looks gentle and Sirichai looks scary."
Gender	3	"Because they are both girls. Girls are similar."

Group membership

The last theme, group membership was discussed by 15% of the children and is a collation of four codes that referred to a range of memberships of the dyad (see Table 19). Although the illustration of the dyads nor the researcher's instruction during the task did not indicate any group membership listed here, it was interesting to find that some children naturally presume some sort of membership and base their judgment on it.

Table 19

Group Membership Theme: Associated Codes, Number of Participants per Theme and Code, and Extracts of Responses

Theme and associated codes	Number of participants	Extracts of responses
Group membership	12	
Friendship	10	"They look like friends. Friends are similar to each other."
All humans are the same	2	"They are from same country. Also they are similar because they are both humans."
Neighborhood	2	"I think they live in different neighborhood."
Student	2	"They are similar because they are both students."

4.4.4 RQ 3: What traits do children focus on when judging the friendship potential of peer dyads?

To examine the traits children focus on when judging the friendship potential of peer dyads, the

ST measured children's friendship potential score under two conditions: first with race and hobby traits of the presented peer dyads, and second with race and language traits. Furthermore, to thoroughly investigate the justification children used for their decision, a thematic analysis was conducted on their responses.

4.4.4.1 Do children focus on race or hobby when judging friendship potential?

A 2 (grade of participant)×3 (race of peer dyad: cross-race, Korean, Southeast Asian)×2 (hobby: same, different) ANOVA with repeated-measures on the last two factors was conducted on the friendship score (see Table 20). Significant main effects for hobby, $F(1, 80) = 16.18$, $p < .001$, race, $F(2, 160) = 17.30$, $p < .001$, and grade, $F(1, 80) = 4.59$, $p = .035$, were found. Moreover, a significant hobby×race interaction was found, $F(2, 160) = 5.84$, $p = .004$. As discussed above (see section 4.4.1), friendship scores revealed an order effect. Accordingly, the friendship scores within each order were also analysed separately. While, the main effects of hobby and race were significant in both order A and B, the grade variable no longer revealed any significant main effect. Moreover, no significant interaction were found within order A (Appendix J).

Table 20

ANOVA Results on the Effects of Hobby, Race, and Grade on Friendship Potential Score

Source	SS	df	MS	F	p
Hobby	31.25	1	31.25	16.18***	.000
Race	34.60	2	17.30	11.27***	.000
Grade	13.67	1	13.67	4.59*	.035
Hobby×Grade	3.59	1	3.59	1.86	.177
Race×Grade	7.43	2	3.72	2.42	.092
Hobby×Race	14.16	2	7.08	5.84**	.004
Hobby×Race×Grade	5.46	2	2.73	2.25	.108
Error(Hobby)	154.50	80	1.93		
Error(Race)	245.63	160	1.54		
Error(Hobby×Race)	194.04	160	1.21		
Error(Grade)	238.07	80	2.98		

* p<.05, ** p<.01, *** p<.001.

In line with the similarity findings, the results suggest that children do not solely focus on race nor hobby in their friendship evaluation. As presented in Table 21, peer dyads with same hobby were more likely to be friends than peer dyads with different hobby. Cross-race peer dyads tend to receive low friendship potential scores. Also, third graders' friendship potential ratings were higher than first graders' besides the score for the Korean dyad with different hobby (KKDH).

Table 21

Means and SD for Friendship Scores of Different Dyads in Race with Hobby Condition

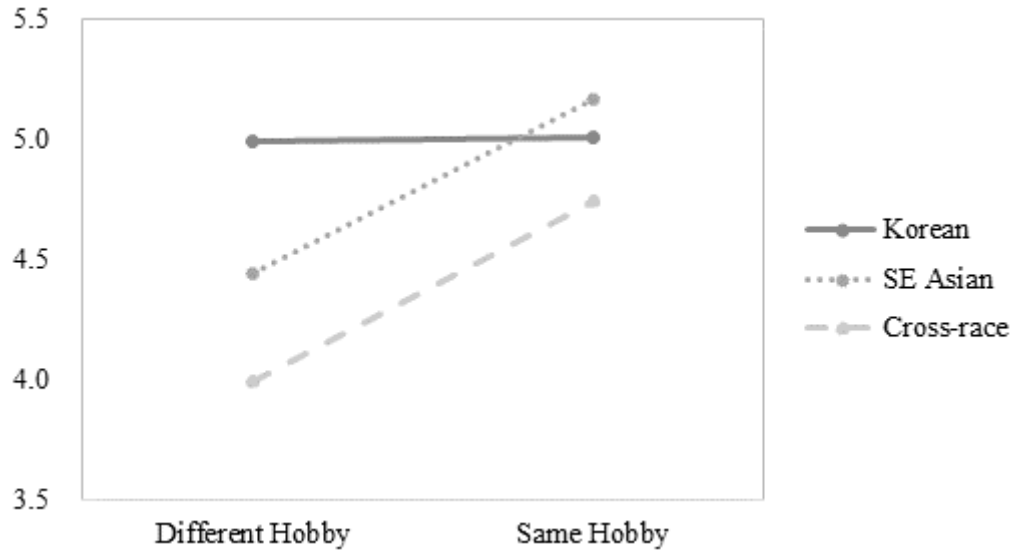
Variable		Grade 1		Grade 3		Total		Range
		M	SD	M	SD	M	SD	
Friendship	KKDH	5.02	1.13	4.95	1.00	4.99	1.06	1-6
	SSDH	4.22	1.72	4.66	1.11	4.44	1.46	
	SKDH	3.93	1.75	4.05	1.43	3.99	1.59	
	KKSH	4.98	1.27	5.05	1.02	5.01	1.15	
	SSSH	4.98	1.46	5.37	0.70	5.17	1.15	
	KSSH	4.22	1.68	5.27	1.05	4.74	1.49	

Note. K = Korean, S = Southeast Asian, DH = Different Hobby, SH = Same Hobby.

A significant hobbyxrace interaction revealed that when the dyads had different hobby, the Korean dyad had the most potential to be friends, whereas when the dyads had same hobby, Southeast Asian dyad had the highest potential (see Figure 10). Also the score gaps in between each racial make-up differed in the same hobby and different hobby conditions. Particularly, the friendship potential ratings of the Korean dyads were almost the same independent of the hobby condition.

Figure 10

Interaction Effect between Hobby and Race on Friendship Potential Scores



4.4.4.2 Do children focus on race or language when judging friendship potential?

A 2 (grade of participant)x3 (race of peer dyad: cross-race, Korean, Southeast Asian)x2 (Language: same, different) ANOVA with repeated-measures on the last two factors was conducted on the friendship score (see Table 22). A significant main effect for language was found, $F(1, 80) = 83.97$, $p < .001$. There was no significant interactions between the variables. Again, as friendship scores revealed an order effect, friendship scores in the race with language set of the ST task were also analysed separately within each order. In both orders, main effect of language was significant but there were no significant interactions found. Only in order B, a significant main effect for race was found (Appendix J).

Table 22

ANOVA Results on the Effects of Language, Race, and Grade on Friendship Potential Score

Source	SS	df	MS	F	p
Language	253.27	1	253.27	83.97***	.000
Race	3.76	2	1.88	1.63	.198
Grade	0.59	1	0.59	0.13	.717
Language×Grade	8.59	1	8.59	2.85	.095
Race×Grade	0.20	2	0.10	0.09	.917
Language×Race	0.17	2	0.09	0.09	.916
Language×Race×Grade	1.64	2	0.82	0.82	.442
Error(Language)	241.31	80	3.02		
Error(Race)	184.04	160	1.15		
Error(Language×Race)	159.52	160	1.00		
Error(Grade)	355.81	80	4.45		

*** p<.001.

A significant main effect for language demonstrate that children's friendship potential score differed according to whether the peers spoke the same or different language, independent of the racial make-up of the peer dyads. That is, dyads that spoke same language had higher potential to be friends than the dyads that spoke different language (see Table 23).

Table 23

Means and SD for Friendship Scores of Different Dyads in Race with Language Condition

Variable		Grade 1		Grade 3		Total		
		M	SD	M	SD	M	SD	Range
Friendship	KKDL	3.44	1.80	3.93	1.57	3.68	1.70	1-6
	SSDL	3.73	1.76	4.05	1.34	3.89	1.56	
	SKDL	3.63	1.64	3.83	1.64	3.73	1.63	
	KKSL	5.27	1.18	4.90	1.28	5.09	1.24	
	SSSL	5.34	1.02	5.27	1.07	5.30	1.04	
	KSSL	5.29	1.05	5.15	1.09	5.22	1.07	

Note. K = Korean, S = Southeast Asian, DL = Different Language, SL = Same Language.

4.4.4.3 Thematic analysis on children's justification of friendship judgment

Commonly discussed themes were derived from the children's responses to the question "Why do you think they are friends/not friends?" In line with children's similarity judgments, a majority of children discussed more than one parameters in their judgment (e.g., "they can be friends because they have similar hairstyle and they both speak Thai"), resulting in a bigger sum of themes discussed than the number of study participants. Children's responses were grouped into two main themes, depending on whether the respondent focused on the similar traits or dissimilar traits when judging the friendship possibility between the dyad (see Table 24).

Table 24

Themes and Frequencies of Each Theme in Participants' Justification of Friendship Potential Judgment

Theme	How many participants discussed it	How many times it was discussed
Similar traits	82	635
Dissimilar traits	80	356

Similar traits

As presented in the Table 25, all 82 participants paid attention to the resemblance between the dyad at least once while judging the 12 dyads. The specific aspects of similarity that they focused on were collected with nine codes. It should be noted that more children focused on shared-language and shared-hobby traits than the racial similarity. This is an encouraging finding in that supporting language education and increasing contact opportunities which may result in sharing hobbies can help promote friendship across racial groups.

Table 25

Similar Traits Theme: Associated Codes, Number of Participants per Theme and Code, and Extracts of Responses

Theme and associated codes	Number of participants	Extracts of responses
Similar traits	82	
Language	68	"They speak the same language so they can have fun together at school."
Hobby	61	"They both like painting. (…) People who enjoy painting usually hang out together."
Racial features	53	
Nationality	36	"They're from the same country so I think they can be friends."
Skin colour	32	"Because they both have dark skin. I think if one had white skin, they would not get along well."
Appearance (non-racial)	46	"They wear the same clothes, live in the same country, and look the same."
Similar in general	28	"They can be friends because they are very similar."
Individual characteristics	25	"Because they have similar personalities."
School	12	"They go to a same school so they get along well."

Dissimilar traits

97% of the participants discussed dissimilar traits when justifying their friendship potential judgment (see Table 26). The specific traits of dissimilarity are the same as the nine codes the similarity traits theme collated. Again, a majority of children focused on the language cues, but they paid more attention to the different racial features than the difference in hobby. On the other hand, though a large number of children focused on the dissimilar traits, not all considered dissimilarity an obstacle. They rated friendship possible despite the difference in language, race, hobby, and individual characteristics. This was an unexpected finding and was coded "disregard difference" under each code to examine the frequencies of its occurrences. As can be seen in how the language difference was not critical to over half of the participants who were aware of the language difference, friendship was probable in many occasions. These findings are promising in that despite the difference across various social groups, friendship may be feasible as long as children learn how to accept the differences and focus on other sources of similarity.

Table 26

Dissimilar Traits Theme: Associated Codes, Number of Participants per Theme and Code, and Extracts of Responses

Theme and associated codes	Number of participant	Extracts of responses
Dissimilar traits	80	
Language	64	"They cannot be friends because they cannot communicate."
Disregard difference	38	"They can be friends because they can learn each other's language or use a translating machine."
Racial features	43	
Nationality	27	"Because they are from different countries."
Skin colour	21	"Because he has dark skin but the other boy has light skin."
Disregard difference	14	"You can still be friends with a different colour person."
Hobby	30	"One likes playing the piano but the other does not."
Disregard difference	12	"If Nutcha plays piano very well, maybe Sieun will learn how to enjoy playing the piano."
Appearance(non-racial)	24	"Because they have different hairstyle."
Disregard difference	6	"They can be friends because I also look very different with all my best friends."
Different in general	16	"They are different so they do not hang out in school."
Disregard difference	9	"They are different but they can still be friends if they try."
Individual characteristics	16	"I think Sieun will find Nutcha's name strange and Sieun does not like playing the piano so they cannot be friends."
Disregard difference	5	"They have different personalities but they can be friends."
School	3	"Because they live in different countries and go to different school."

5. Discussion

This chapter situates the findings of the present study within the context of the child bias literature. The main findings are outlined in relation to each domain of bias. The study's limitations are then presented followed by the present study's potential contributions to research and educational policies of Korea. A final conclusion is then discussed.

5.1 Discussion on main findings

5.1.1 Racial attitudes

One goal of the present study was to measure young Koreans' racial attitudes toward different racial groups. As bias lies in the negative attitudes toward a particular racial out-group and positivity towards their in-group (Brown, 1995), children's negativity and positivity attitudes scores in Multi-Response Racial Attitude Measure were analysed separately. Results revealed that both first and third grade children gave more negative attributes to the Southeast Asian target (M = 2.30) than Korean (M = 1.62). On the other hand, both groups of children gave more positive attributes to the Korean target (M = 9.39) than the Southeast Asian (M = 7.30). Contingent on those scores, the prejudice score (sum of Korean positivity and Southeast Asian negativity) was higher than the against-prejudice score (sum of Korean negativity and Southeast Asian positivity) for both grades. These findings are consistent with previous findings of this age band. Children explicitly expressed favoritism towards their in-group and relative negativity towards the racial out-group (e.g., Doyle & Aboud, 1995; Jung & Oh, 2016; Row & Bang, 2009). Given that the nationality and skin colours of the targets were the only difference in the illustration of targets and that they were not forced to choose either one of them as they had the "none" or "all" option, these findings also clearly demonstrate young Koreans' racial prejudice towards Southeast Asians.

However, examining the age changes in children's against-prejudice score (i.e., out-group positivity and in-group negativity) shed a hopeful light. While the prejudice score remained consistent across grades, against-prejudice score was significantly higher in third grade (M = 10.37) than first grade (M = 7.49), indicating that children in this sample begin to relate positive qualities to the Southeast Asian target. That is, whilst their negativity towards Southeast Asians remains the same, they begin to

see positive attributes in Southeast Asians. Referring back to the literature, this finding could be a sign of cognitive maturation in that third graders in the concrete operational stage start focusing on the individual characteristics rather than a single category (i.e., race) and understand that the two different racial groups can share other similar attributes (Bigler & Liben, 1993; Doyle & Aboud, 1995; Katz & Zalk, 1978). Alternatively, it could simply be an outcome of the social desirability concerns of the older children. Third grade students may mask their true prejudice noticing that prejudice is undesirable (Aboud & Amato, 2001; Katz et al., 1975, Rutland et al., 2005). Although the author explained to the children that they will not be judged and remain anonymous, they could have acted cautiously, and thus the results should be interpreted with care due to social desirability concerns.

Overall, these findings suggest that young Koreans exhibit prejudiced attitudes, assuming Koreans have more positive attributes and Southeast Asians have more negative attributes. Nevertheless, a closer look into the composite scores suggests that older children start assigning more positive attributes to Southeast Asians. Identifying such developmental patterns in against-prejudice attitudes support Doyle and Aboud's (1995) findings with the White children and thereby highlights the need to support children in this age group to enhance their against-prejudice attitude which may in the end inhibit prejudiced attitude. However, this interpretation should be mindful of the social desirability concerns. For a more comprehensive understanding, future research should compare the present study's result to the measures that are less susceptible to social desirability concerns, such as implicit bias measures.

5.1.2 Ethnic categorization

Another goal of this study was to examine whether children categorize peers by race through examining the traits children attend to when judging the similarity of different peers. As discussed in the literature review, Korean society's emphasis on racial homogeneity could lead to bias in children as over-using racial similarity disposes children to categorize people by race and in the end, creates bias. With this regard, examining the relative importance of racial and non-racial traits in similarity judgments was of particular interest in this section. To answer this question, the study expanded Similarity Task, the tool McGlothlin et al., (2005) developed for their study. An additional parameter of

language and hobby were added to the tool and both were found to be strong variables in children's similarity judgment. Adding qualitative analysis to carefully examine all the justifications children gave for their similarity judgments is another expansion of McGlothlin et al.'s (2005) study. The current study did not hastily categorize children's responses into pre-set categories but found meaning inside children's responses.

Consistent with the European American children in McGlothlin et al.'s (2005) study, race was a salient feature in Korean children's similarity judgment. Koreans rated same-race children more similar than cross-race in both sets of hobby and language. The thematic extraction also confirmed this finding as the racial features theme was discussed the most. Furthermore, outgroup homogeneity effect was also found in both sets, approving the child's focus on race once again. Children judged Southeast Asian pairs to be more similar than the Korean pairs, assuming homogeneity within the Southeast Asians. As outgroup homogeneity implies that children plainly categorize people by race and ignore individual characteristics, outgroup homogeneity is an important mark of bias. Aboud and Amato (2001) explained that children in the preoperational stage tend to exaggerate distinctions between racial groups and homogeneity within groups as they are unable to use multiple categories and thus over-use pronounced features such as skin colour. However, in the case of Korean children, outgroup homogeneity is clearly demonstrated even within third graders in the concrete operational stage of cognitive development. Social factors such as contact experience may give an explanation for this extension. The demographic information of children (Table 1) indicates that the majority of the participants have not met Southeast Asian, and even when they did, most of the contacts were through the media or overseas travel. Moreover, nearly 80% of them did not have Southeast Asian friends. Clearly, the participants had little opportunity to meet or interact with Southeast Asians. This means that regardless of their cognitive advancement to consider multiple categories, the third graders' unfamiliarity with this racial out-group drove them to pay little attention beyond the salient feature of race.

However, it should be noted that race was not the only pronounced feature to children. Independent of the same-race, cross-race conditions, dyads with the same hobby received higher

similarity ratings than the different hobby dyads, and dyads with the same language were considered more similar than the dyads with different language. In fact, in some cases, same hobby or same language condition was more important than race. In the race with hobby set of Similarity Task, the cross-race dyad with same hobby (KSSH: M = 4.11) had higher similarity ratings than the same-race different hobby dyads (KKDH: M = 3.22, SSDH: M = 3.73). Likewise, in the race with language set, children judged the cross-race with same language (KSSL: M = 4.40) more similar than same-race dyads with different language (KKDL: M = 2.88, SSDL: M = 3.16), indicating that language was more important than race when they made similarity judgment. Furthermore, significant interactions between language and race also suggest that children use both features to judge similarity.

An unexpected finding from the qualitative data is the children's focus on multiple features in their judgment. When asked to justify their ratings, not only did children discuss multiple features, but also some of them explained both similar and different aspects of the dyads. This means that some considered both traits of similarity and difference to make the similarity judgment. Such responses may be a reflection of children's complex reasoning behind the decision-making and therefore analyzing the rationale building in those mixed answers will give more insights into children's similarity perceptions. Though the mixed answers had been excluded for the main analysis for this study, future studies looking into them will help understand Korean children's rationale building behind their similarity perceptions.

Overall, the main findings in this section replicate the findings in McGlothlin's study (2005) and further endorse their claim that children weigh multiple sources of information in their similarity judgments. Especially with the Korean participants, the study scrutinized whether they focus on racial homogeneity when clues of non-racial features are obvious. Though it was confirmed that children do focus on racial homogeneity and outgroup homogeneity effect exists even when other non-racial cues are salient, there were also some encouraging findings. Children attended to multiple features in their similarity judgment and thereby the same hobby and same language conditions can be as important as race. In this context, outgroup homogeneity effect could be tackled through the emphasis of categories beyond race. In order to do so, future research should explore more on the underlying cause and developmental pattern of the outgroup homogeneity effect.

5.1.3 Cross-race peer relations

The weight of racial and non-racial information was examined within children's friendship potential judgment. Again, in the race with hobby set, children attended to multiple sources of information just as they did in their similarity judgments. While dyads with the same hobby received higher friendship potential ratings than the different hobby dyads, race was also factored into the decision-making as cross-race peer dyads in both the same and different hobby conditions were judged to have the least friendship potential. Likewise, the significant interaction effect of hobby and race demonstrated the use of both features in their decision-making. This is a contrasting finding with McGlothlin et al.'s (2005) study, where race was not a strong factor in children's friendship potential judgment. Once again, this discrepancy could be explained by young Koreans' focus on race caused by the unfamiliarity with Southeast Asians, as mentioned in the section above. Nevertheless, children were more optimistic about friendship with age in all conditions except for the Korean dyad with different hobby as first graders gave higher friendship ratings for that dyad.

In contrast, race was less salient in the race with language condition. Significant main effect was only found in the language variable, indicating that language was an important factor independent of the racial make-up of each dyad. Dyads that spoke the same language were more likely to be friends than those speaking different language. This is a powerful finding that reinforces McGlothlin et al.'s (2005) study in that children did not use race as a factor in their friendship potential judgment. Shared language foreshadowed cross-race condition in friendship judgment. For instance, despite the different racial make-up in the cross-race shared language dyad, this dyad was judged to be more likely to be friends (KSSL: $M = 5.22$) than same-race different language dyads (KKDL: $M = 3.68$, SSDL: $M = 3.89$). Children's focus on language was also supported in the qualitative analysis as children discussed the language theme the most in their justification of friendship judgments.

A closer look at the qualitative data supports the past findings in the literature. Similarity was a strong factor in children's justification of their friendship decision. (e.g., Aboud et al., 2003; Clark & Ayers, 1992). All 82 participants discussed the similarity theme at least once while judging the 12 dyads. Particularly the similarity of language was discussed the most, followed by hobby, and racial features.

Other similar traits related to the dyads' appearance, such as clothes, hairstyle, and facials features, were discussed though not as frequently as the salient features of language, hobby, and race. On the other hand, a fair amount of attention was given to the dissimilar features of the dyads. That is, children also examined dissimilar features to judge friendship potential. Again, language dissimilarity was considered to be the most pronounced feature, however, race dissimilarity was discussed more than hobby in this case. Despite the attention to dissimilarity, it should be noted that dissimilarity was not always considered to hinder friendship. Though children were aware of the dissimilarity in language, race, hobby, appearance, and individual characteristics, many of them disregarded those differences when rating the friendship potential. For example, out of 64 children who noticed the difference in language, 38 children did not consider the difference to stop the dyad from being friends (e.g., they speak different languages but if they both learn English together they can communicate and become friends). This finding indicates that the dissimilar features were not critical to children's friendship decisions as similarity features. As reported in children's similarity judgment, mixed responses that include both justifications of possible/impossible friendship were also given in children's responses. Though they were excluded from the main analysis, those mixed answers will help understand how different sources of similarity and dissimilarity were weighed in children's decision-making in future studies.

The main findings in this section expand the work of McGlothlin et al. (2005) in that it confirmed other important sources of similarity in children's friendship potential judgment. Language and hobby were powerful attributes that affected children's potential judgment. Particularly, shared-language condition led to higher friendship potential independent of the racial make-up of the dyads. Adding a qualitative analysis was an additional expansion of the previously used measures which only centered on race as the basis of similarity evaluations (e.g., Doyle & Aboud, 1995; Katz et al., 1975) or arbitrarily categorized children's responses into pre-set categories (e.g., Margie et al., 2005; McGlothlin et al., 2005). Through the qualitative analysis, similarity was highlighted as an important factor in friendship potential while dissimilarity did not seem to impact friendship potential in many cases. Strong effects of language and hobby were once again demonstrated through the high frequencies of

both themes in children's justifications of judgment. In all, these results provide insights into children's judgment of similarity and friendship potential as a comprehensive examination was carried out through a wide range of similarity sources and qualitative methodology.

5.2 Limitations

5.2.1 Validity and order effect concerns

Due to the restricted access to schools and participants in the pandemic situation, non-probabilistic sampling was adopted in recruitment. This puts a threat on the external validity and internal validity causing the reduction in the representativeness of the sample, meaning that the findings of the study may not be generalizable beyond the participants. It should be noted, however, that the author tried to ensure other aspects of validity where possible. The author tried to ensure consistency in the online setting by strictly following pre-set protocols (e.g., guidance to the parents beforehand about the required isolated and quiet setting; sticking to the script for every session).

Another potential limitation regards the limited order variations. Although efforts were made by counter-balancing the order between the main two tasks, given the variety of items within each task, manipulation of item orders within each task could also be needed. Particularly because an order effect was found between the two main tasks (see section 4.4.1), varying the presentation of dyads in the Similarity Task or the sequence of attributes in Multi-Response Racial Attitude Measure could also result in different findings. Though the relatively small sample size and the logistic complexity involved made it difficult to consider all possible order variations for each session, it will be meaningful to meticulously consider the order variation and rule out the order effect in future studies.

5.2.2 Qualitative analysis

The author made a meaningful initial step to address the limitation of past measures by adopting a qualitative method to children's justifications behind their similarity and friendship potential ratings. By adopting thematic analysis, an important developmental aspect of cognitive sophistication was captured in children's mixed responses. This means children did not simply focus on one salient trait to make judgments but weighed multiple sources of similarity and dissimilarity to come to a conclusion.

To the best of author's knowledge, nowhere in the literature does it state that children pay attention to both similarity and dissimilarity when making judgements about cross-race peer relations. Despite the potential implications mixed answers could have, they were excluded from the main analysis as rigorous analysis on interpreting the underlying nuance in the mixed responses was not feasible in this study. Moreover, while the thematic analysis helped identify frequently discussed themes beyond the main variables (i.e., race, language, and hobby), further analysis of examining the frequencies of each theme by the participants' demographic information could have discovered individual traits related to certain judgments. These questions are left for future studies to examine with the highest rigour. Despite these limitations, the study is yet meaningful in that it demonstrated the suitability of qualitative analysis on this topic.

5.3 Potential contributions to research and educational policy

The present study extends the previous studies in four ways. First, by adding new parameters to the Similarity Task, the study identified two powerful sources of similarity which are hobby and language. Accordingly, new findings suggest that sharing the same hobby or language can have more impact than racial difference in children's similarity judgment. Similarly, regarding children's decision-making on friendship potential, hobby and language traits were found to be a crucial source of similarity which overshadowed the racial makeup of the dyads. Adding more parameters to the Similarity Task offered a comprehensive understanding of how perceptions of similarity are played out in Korean children's bias.

Second, adopting a qualitative analysis for children's explanations on their judgments supports the past findings in the literature which found similarity as a strong factor in children's friendship decisions (e.g., Aboud et al., 2003; Clark & Ayers, 1992). Similarity was discussed more often than dissimilarity and in many cases, dissimilarity was disregarded in the analysis of children's friendship potential judgment. Moreover, the qualitative analysis also disclosed the complexity underlying each decision-making. Whereas quantitative analysis in the past studies trivialized children's ability to weigh, disregard, and decide on multiple sources of similarity and dissimilarity, this study highlights children's sophistication and calls for more interest in qualitative analysis to capture their complex reasoning.

Third, measuring Korean children's bias with Multi-Response Racial Attitude Measure and Similarity Task expanded the use of both tools to a new country context. Although partial outcomes demonstrated young Koreans focused on race unlike the European-American children in their similarity and friendship potential judgment, the overall outcomes paralleled to the past studies, and thereby the reliability of these tools were affirmed.

Fourth, racial targets in both study tools were changed to represent Southeast Asian targets to further study a racial group that is receiving considerable attention in educational policies in Korea. Through the comprehensive analysis of each racial domain, it was confirmed that children portray racial attitudes to Southeast Asians, regard them differently from Koreans, but judge friendship possible as long as they shared same hobby or language with Koreans.

Through these expansions, the present study demonstrated that emphasizing non-racial similarity can help expand children's homogeneity criteria and thereby prevent them from categorizing people by race. This is a meaningful finding in that it points to a new direction educational policies of Korea should take when developing multicultural education policies. The current multicultural education policies focus on educating multicultural children and supporting them to assimilate to the Korean society. In contrast, the racial majority in Korea receives less education and when they do, the difference between groups are actually accentuated since the focus is on respecting the differences between groups. Unfortunately in this message, there is a premise that the two groups are distinct. As demonstrated in the present study, Korean children can clearly see the difference between racial groups and hold different attitudes toward each group. On the other hand, they give more attention to similarity features than dissimilarity features when judging the friendship potential. Thus instead of giving moral lessons that asks children to respect the difference, educating the children to expand their homogeneity criteria beyond race may be more effective as other powerful sources of similarity downplay racial differences.

The present study made an important initial step in that it demonstrated an important cognitive-developmental factor related to Korean children's bias, namely perceptions of similarity. Future studies

should expand these findings and carry out qualitative studies and experimental studies to further prove the influence of training cross-cutting similarities between racial groups on bias reduction.

5.4 Conclusion

The present study aimed to assess different domains of bias in first and third grade Koreans. Given the Korean society's long emphasis on ethnic homogeneity, examining the relative importance of racial similarity compared to non-racial similarity traits was of particular interest. The results indicate that both age groups had higher prejudice scores than against-prejudice scores. However, third graders held significantly higher against-prejudice score than the first graders, suggesting that third grade students are aware of both the positive and negative attributes of the out-group members. Moreover, though it was confirmed that children focus on racial homogeneity, when the dyads shared same hobby or language, these non-racial traits were more important than race in their similarity judgment. Both hobby and race were important in children's friendship potential judgment whereas children focused more on language similarity than race to judge the friendship potential. Qualitative data further supported these findings in that children discussed multiple features to justify their decision-making on similarity and friendship potential. Future studies investigating more components of bias and other powerful sources of similarity could further provide insights into Korean children's bias development, which could in turn inform the design of early interventions to prevent potential racial conflicts.

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Appendix A: Pilot Summary

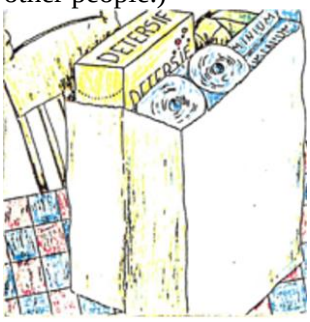
This appendix summarizes the two pilot sessions held in mid-May. The first session was with five children, the second session was tested with one child. The pilot session examined the following points: (a) whether the illustration of the items in each task was read consistently, (b) whether children showed fatigue with the total 36 items in the session (24 for MRA, 12 for ST), (c) the feasibility of delivering the tasks online. Changes were made where necessary.

First, to check whether the illustration of the items was read as intended, Multi-Response Racial Attitude Measure (MRA) and Similarity Task (ST) were tested with five children in the first pilot session. Regarding MRA, all attributes were presented with the vignettes, to also confirm the suitability of the descriptions for each attribute. The items were examined with two to four steps: (1) presented the vignette without any description to examine how the child thinks about the picture (e.g. what do you think is happening here?); (2) supplied with several options of both positive and negative attributes and let them choose (e.g. does this picture look wonderful (intention), kind (confound), or selfish (opposite valence)?) If the child's answer includes the intended description finished here. If not, moved on to the third step; (3) told the intended attribute and checked if they agree (e.g., I think this could mean wonderful. Do you agree that this picture could be described as wonderful?) If they agree then the item is working. But if they don't, the item is weak and needed to be replaced; (4) presented an alternative vignette and moved on to the fourth step; (4) asked the same question as before (e.g., then does this look wonderful?). Details on the changes made on item and overall layout in the MRA task is presented in Table A1.

Table A 1

Changes of Items and Layout in Multi-Response Racial Attitude Measure (MRA)

Development	Before revision	After revision	Reason
Replacement of attributes	Nice (=Some children are nice. When they receive a present they remember to say thank you.)	Polite	Repetitive with other positive attributes (e.g., nice, good, wonderful, kind)
	Unfriendly (=Some children are unfriendly. They are always pushing other children around and getting into fights.)	Gets angry easily	Descriptions do not match when translated into Korean
	Friendly (=Some children have a lot of friends because they are fun to be with.)	Popular	
Replacement of vignettes and descriptions	Bad (=Some children are bad. They take money from their mother's purse and they don't tell her.) 	Bad (=Some children do bad acts. They steal things and lie.) 	Not read by children and adapted to Korean context.
	Wonderful (=Some children are simply wonderful. They can do just anything with glue and paper.) 	Wonderful (=Some children are wonderful. They are like Superheroes.) 	Not read by children.

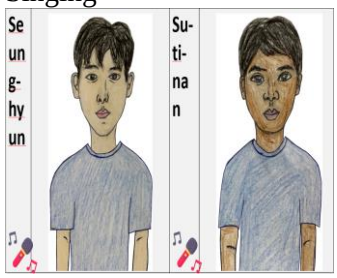
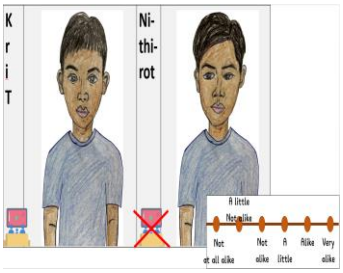
	Helpful (=Some children are helpful. They like to carry things for other people.) 	Helpful (=Some children are helpful. They help people in need) 	
Layout Changes			- Addressed possible priming effect. The negative connotation of a trash bin, may prime children to put all the negative attributes in the trash bin. More neutral object was needed. - Location of the box changed to the middle of two racial targets to equal the distance in between.

Similarly, modifications were made within ST as unexpected confounds were found through the pilot session (Table A2). In additions, the visualized scales were changed. In the first pilot, the similarity ratings had six points and each point was stated as: not at all alike, a little not alike, not alike, a little alike, alike, and very alike. The friendship potential ratings had four points and each point was stated as: no way friends, probably not friends, probably friends, and definitely friends. As the first pilot concluded that the scale was too wordy and inconsistent, especially for first graders, scales have been replaced with less words and more visual cues. Therefore for the second pilot a new design of scale was developed. Similarity ratings and friendship potential ratings both had six points and only the points on each end was stated with words of degree. Instead of the words, the different degree of each points were visualized with different sizes of each point. For the similarity ratings scale, the point on the left end was stated as ‘not at all’ with the smallest size of a circle, the points gradually grew bigger towards the right, and the point of the right end was stated as ‘very’ with the

biggest size of a circle.

Table A2

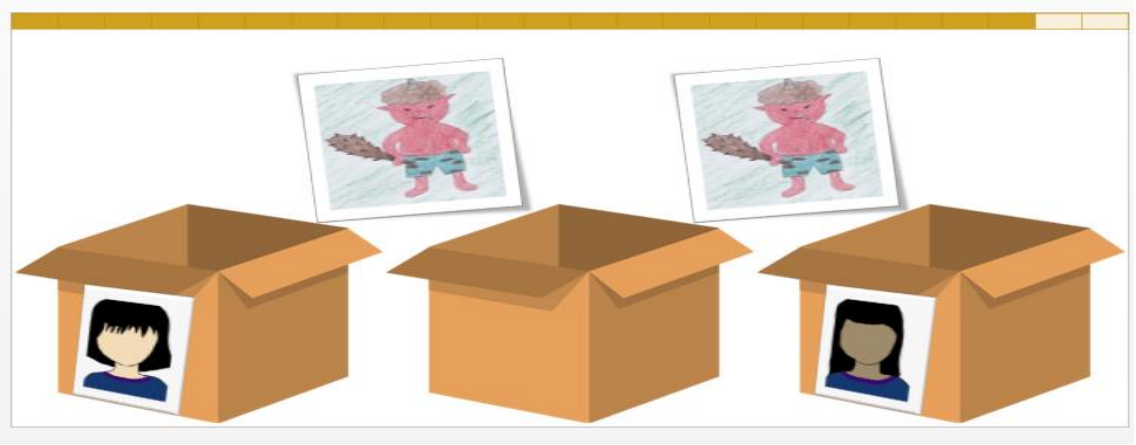
Changes of Hobby, Language, and Scale illustration in Similarity Task (ST)

Development	Before revision	After revision	Reason
Type of hobby	Mobile game 	Singing 	As mobile game implies rivalry, children made negative assumptions.
Dialogue in the second set (race with language)	“Hi, nice to meet you.”	“The weather is warm.”	Children assumed friendship because the peers greet each other.
Scale			Scale was too wordy and inconsistent.

Second, children expressed fatigue with the 36 items of the session. Given the importance of all 36 items, shortening the items seemed implausible. Instead, a progress task bar was added on top of the screen to let the child be aware of the progression (see Figure A1). Accordingly, the participant in the second pilot was able to concentrate better.

Figure A1

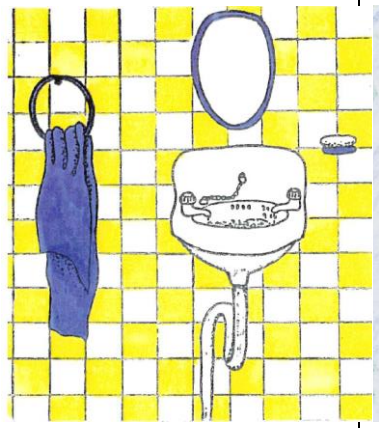
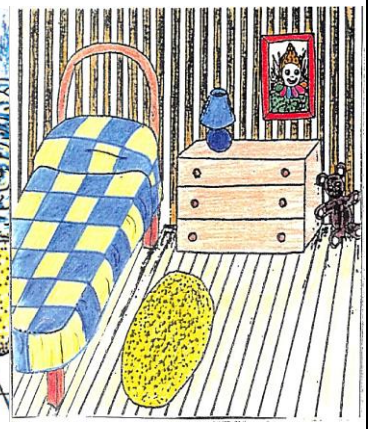
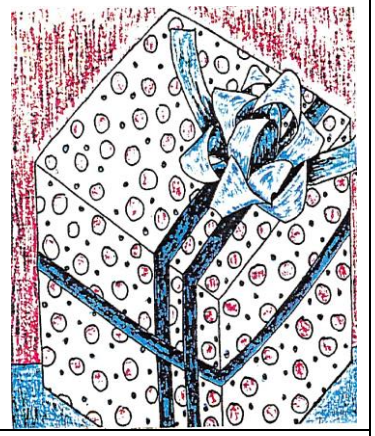
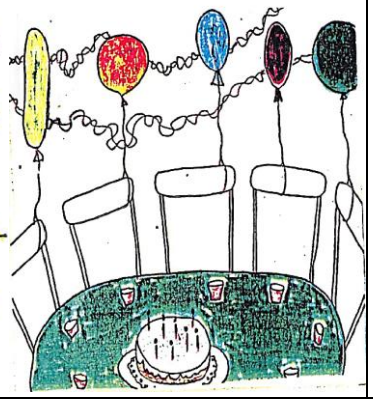
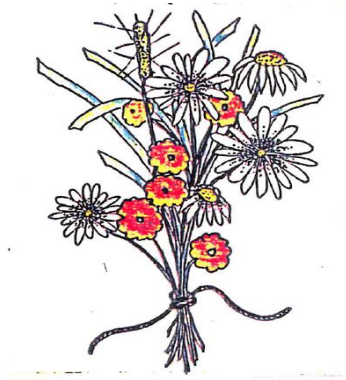
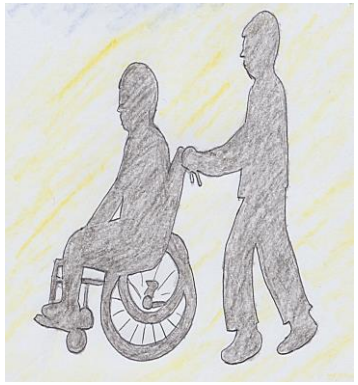
Screenshot of the Progress Bar on Top of the Task Screen

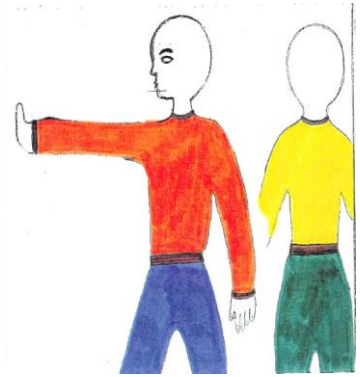
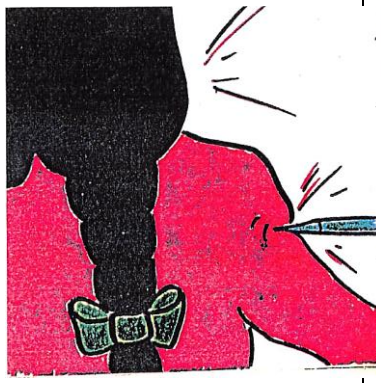
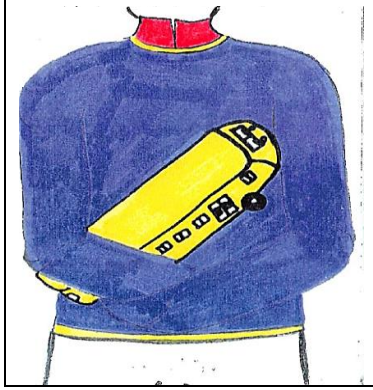


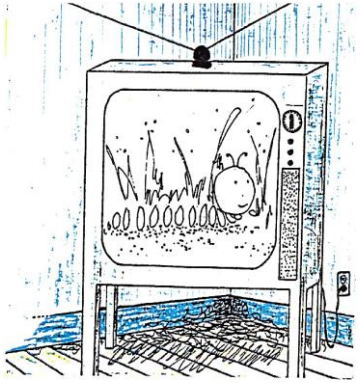
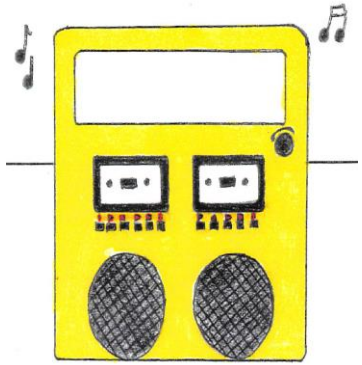
Lastly, the feasibility of delivering the tasks online was examined. Although there was a concern using Microsoft Teams platform, there was no problem during the two pilots as the participants smoothly followed the step-to-step guideline informed before each session. Also, the two pilot sessions ensured that computer, laptop, tablet, and smartphone were all compatible for the study. Given that the shared screen function of Microsoft Teams functioned well with all device, the researcher did not limit the use of any device in the main study.

Appendix B: Task Materials

(1) Vignettes in Multi-Response Racial Attitude Measure (MRA)

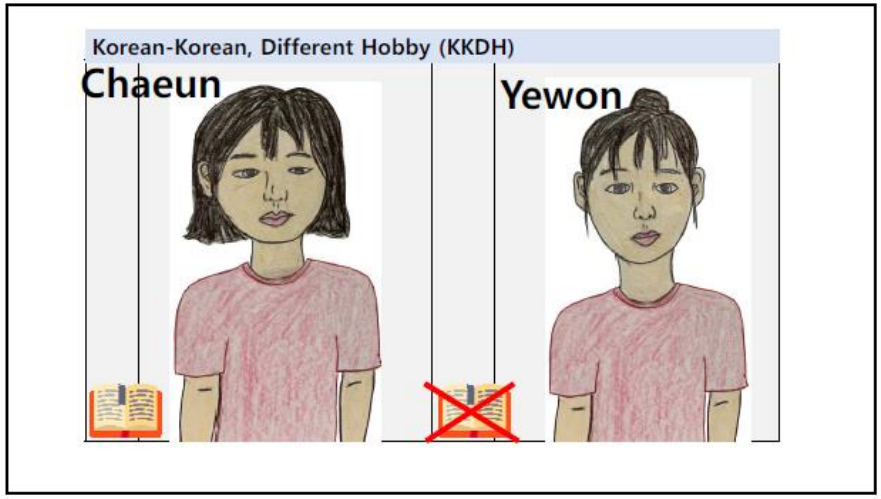
Positive attributes				
clean	**wonderful**	**healthy**	**good**	**polite**
				
happy	**popular**	**kind**	**helpful**	**smart**
				

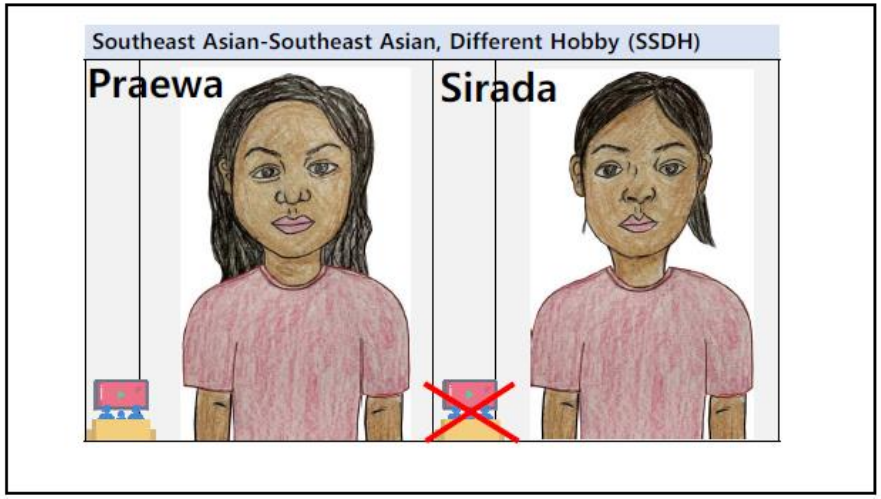
Negative attributes				
unfriendly 	**mean** 	**dirty** 	**cruel** 	**stupid** 
selfish 	**sick** 	**naughty** 	**won't let others play** 	**bad** 

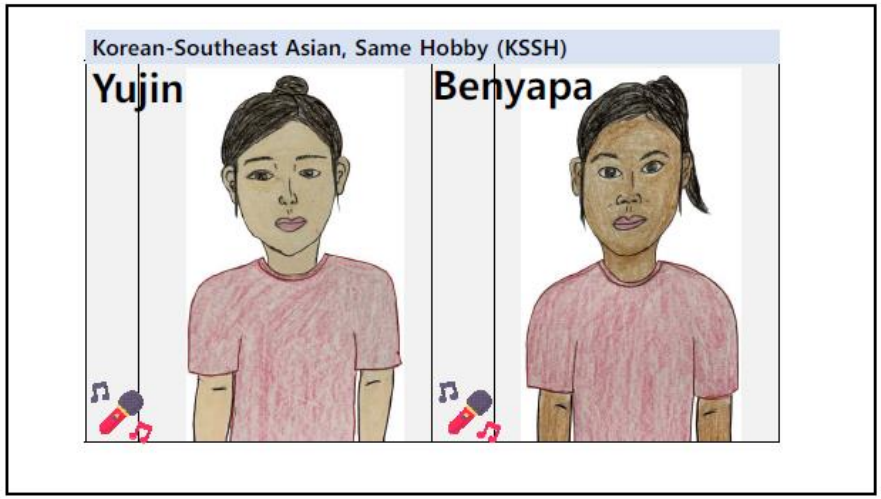
Filler items			
likes to walk 	**likes to sing** 	**likes TV** 	**likes music** 

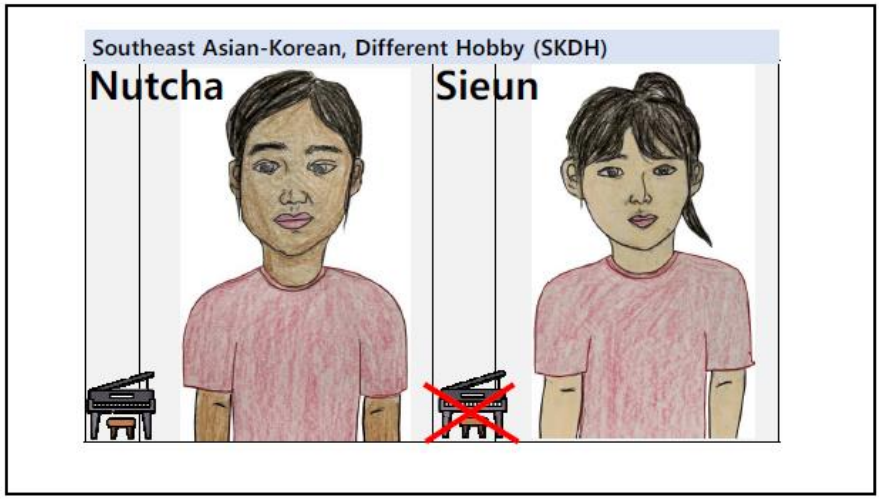
(2) Picture cards of peer dyads in Similarity Task (ST)

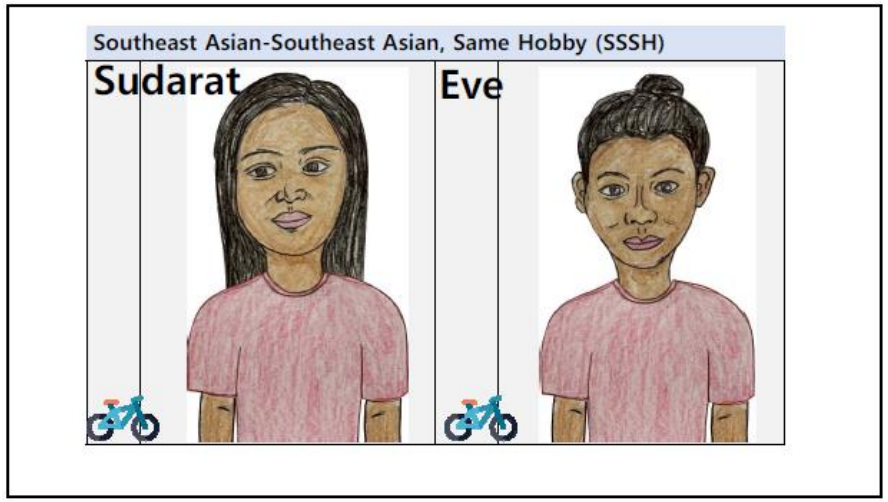
Set 1: Race with Hobby (Female version)

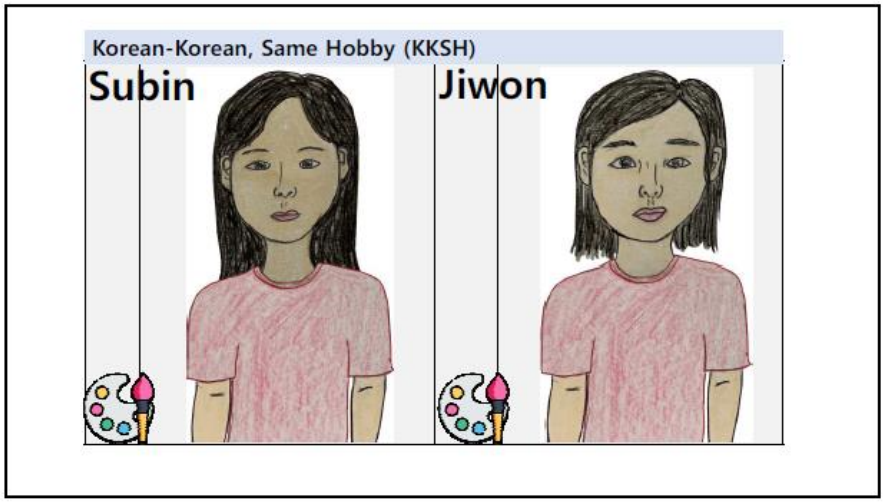




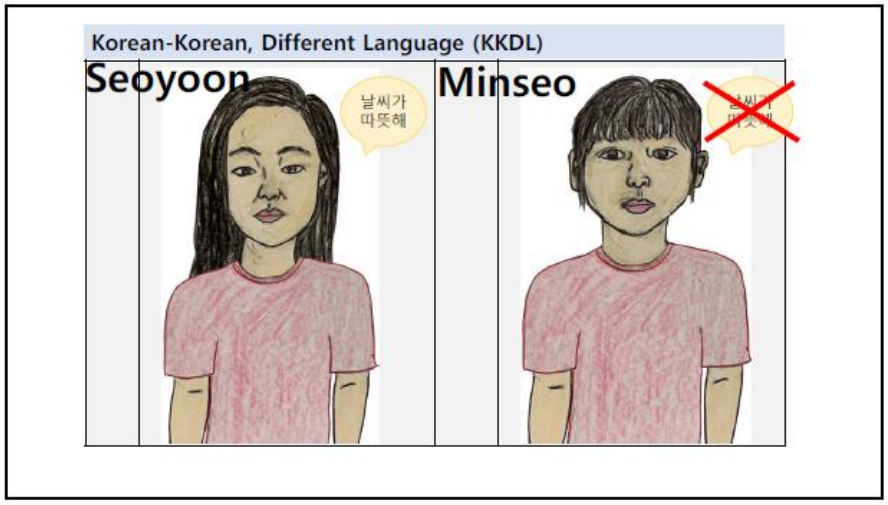


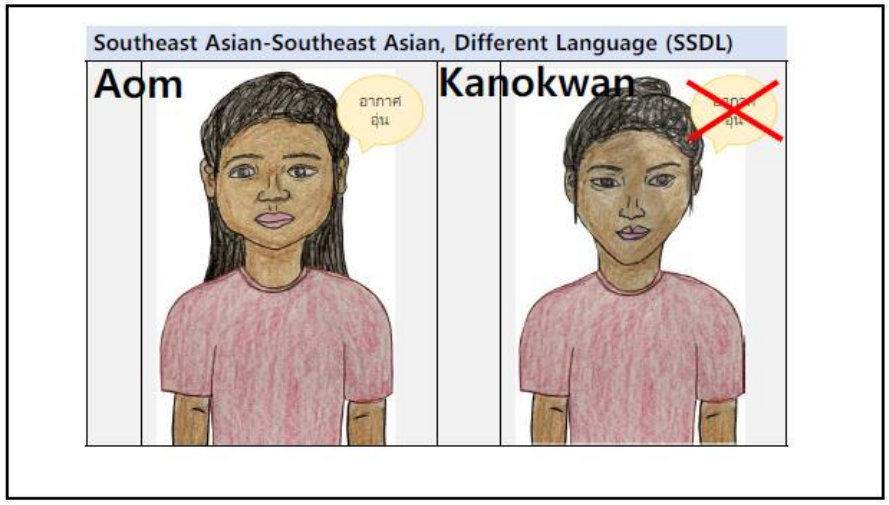




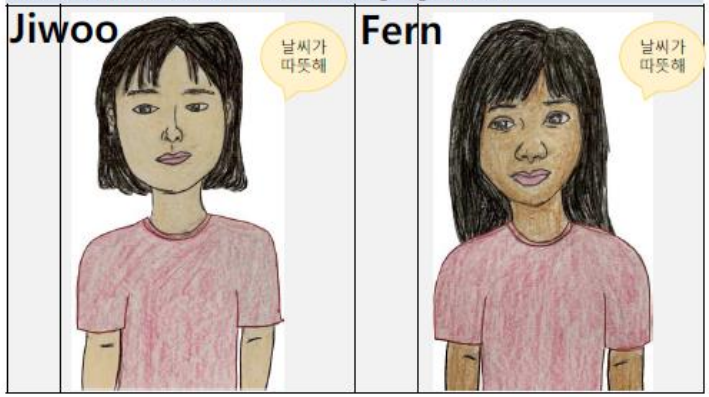


Set 2: Race with Language (Female version)

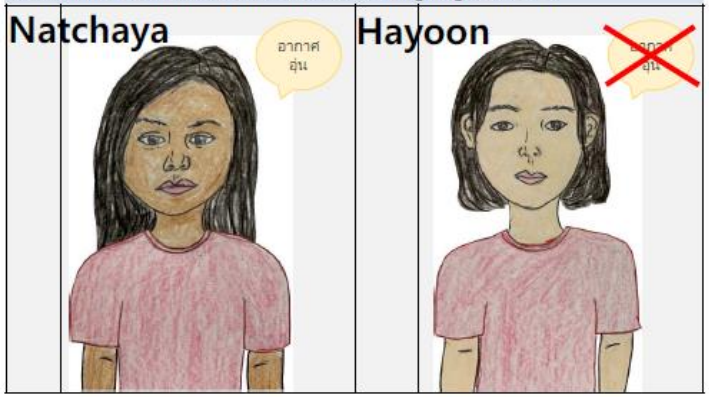




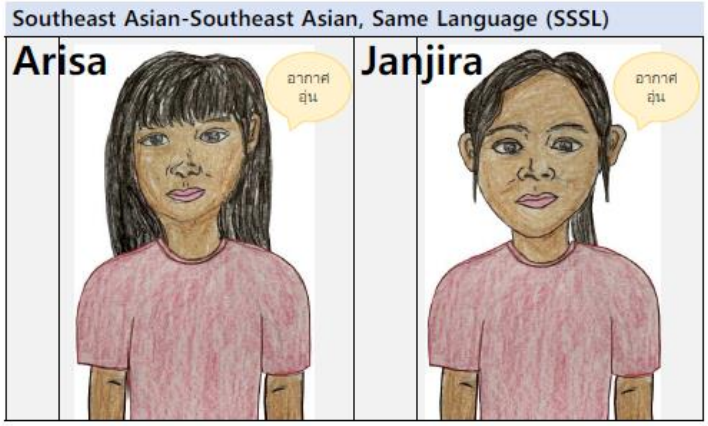
Korean-Southeast Asian, Same Language (KSSL)



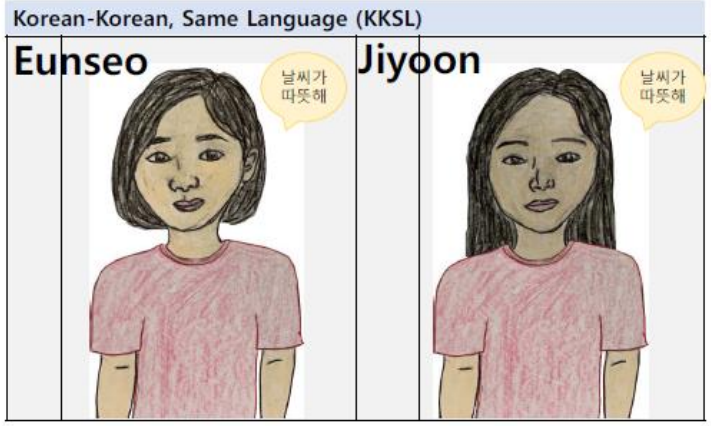
Southeast Asian-Korean, Different Language (SKDL)



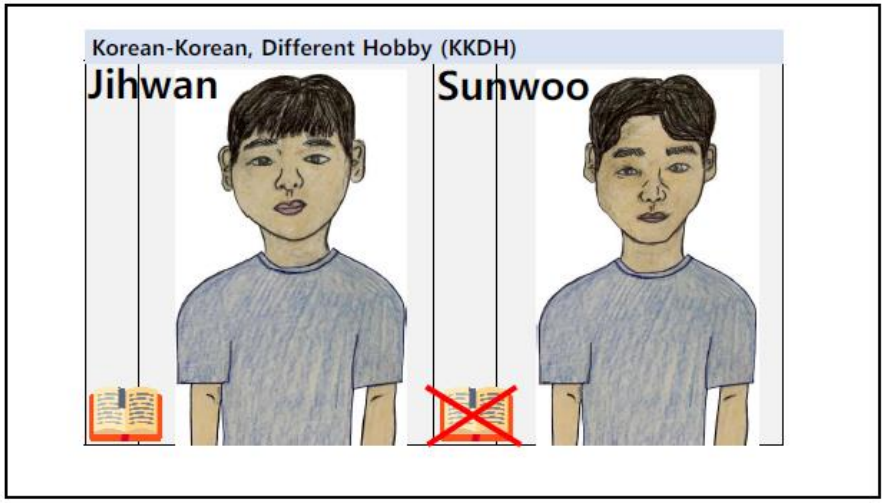
Southeast Asian-Southeast Asian, Same Language (SSSL)

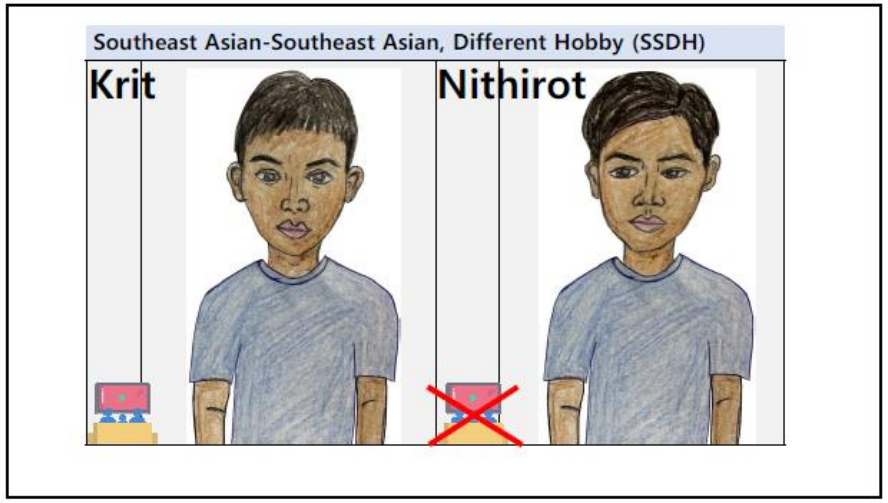


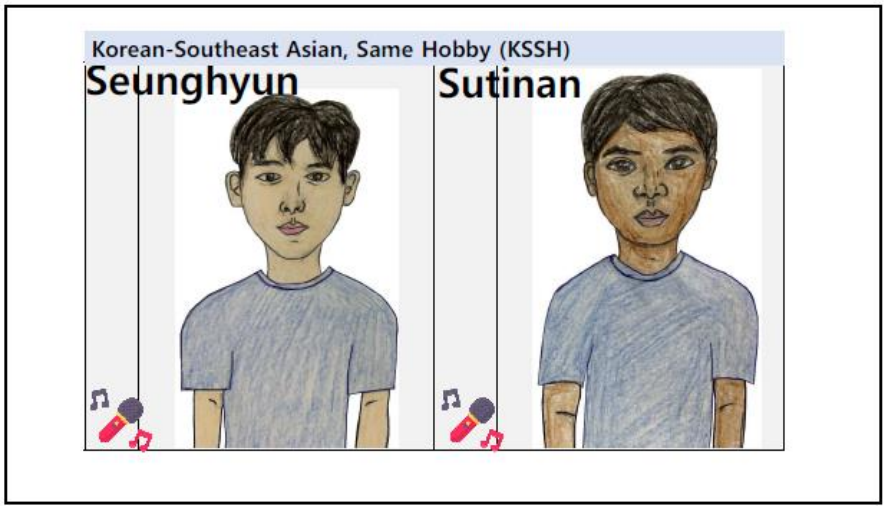
Korean-Korean, Same Language (KKSL)

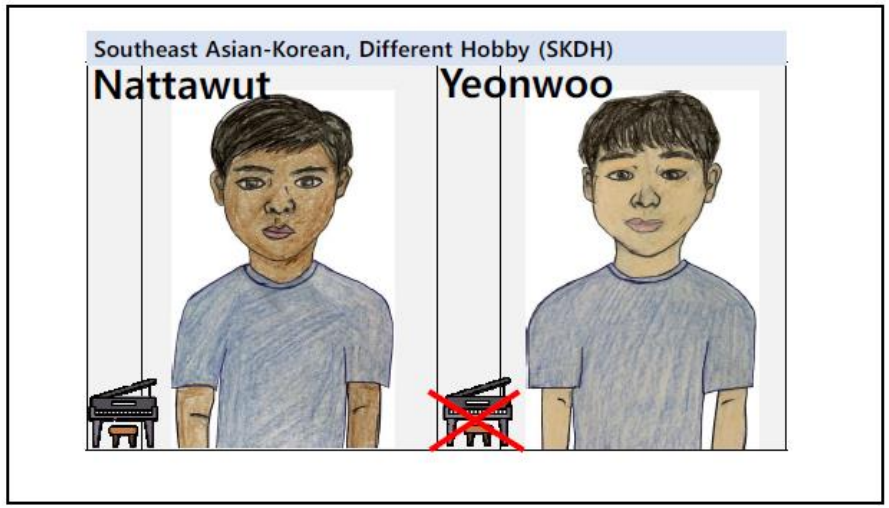


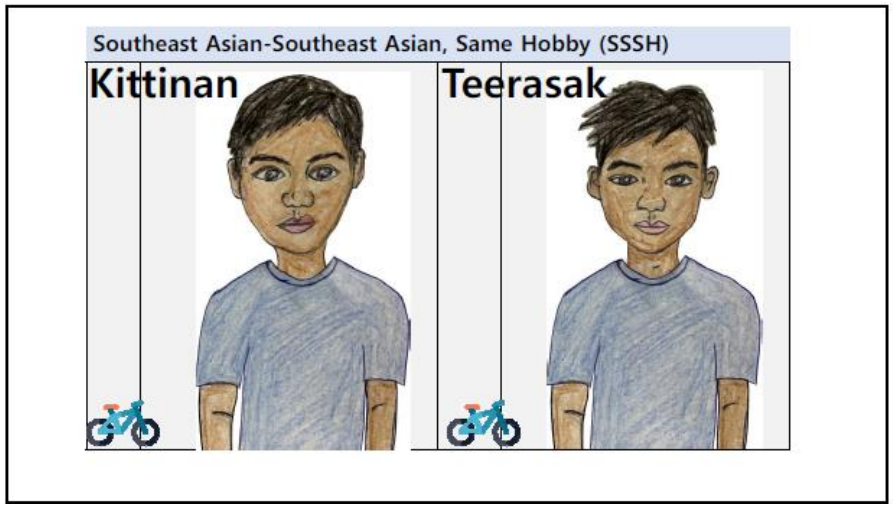
Set 1: Race with Hobby (Male version)

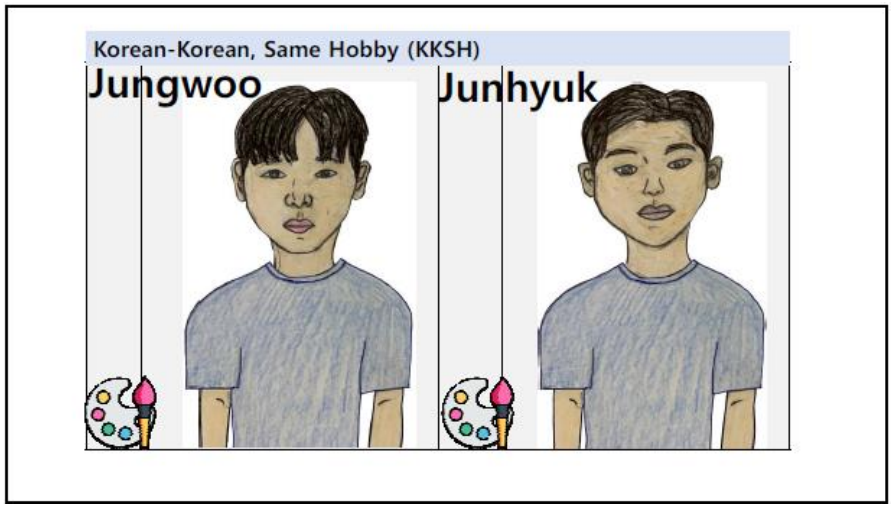




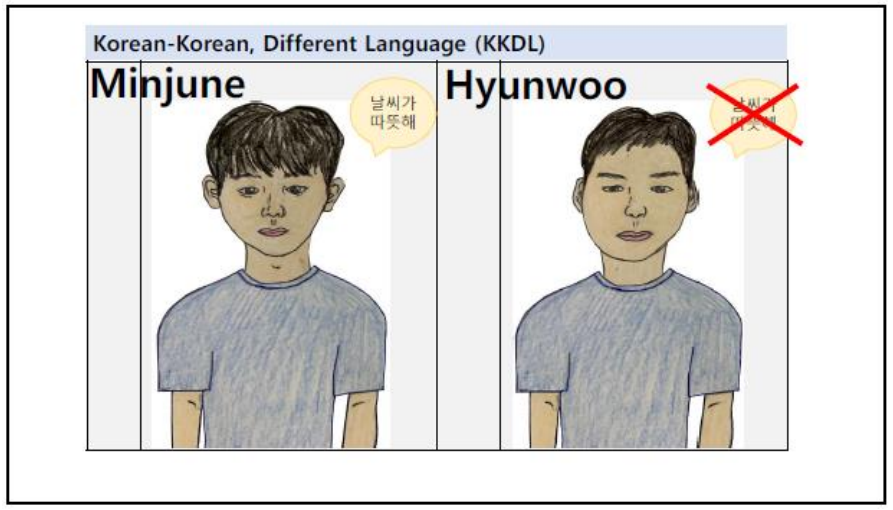


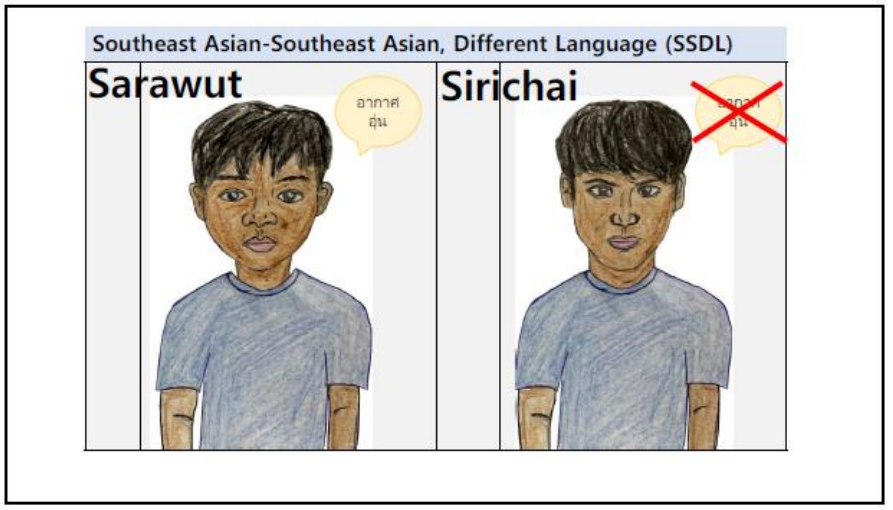




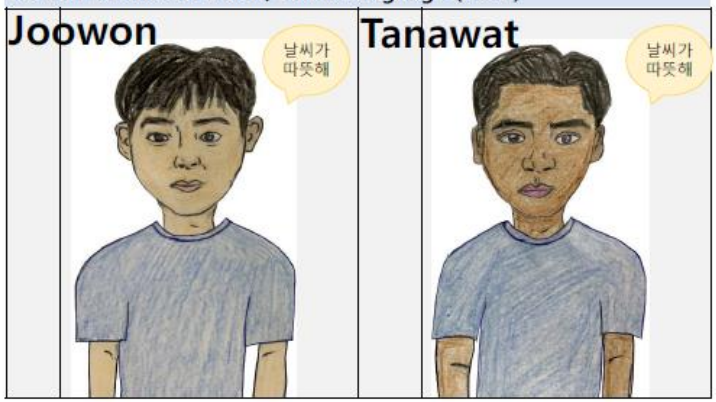


Set 2: Race with Language (Male version)

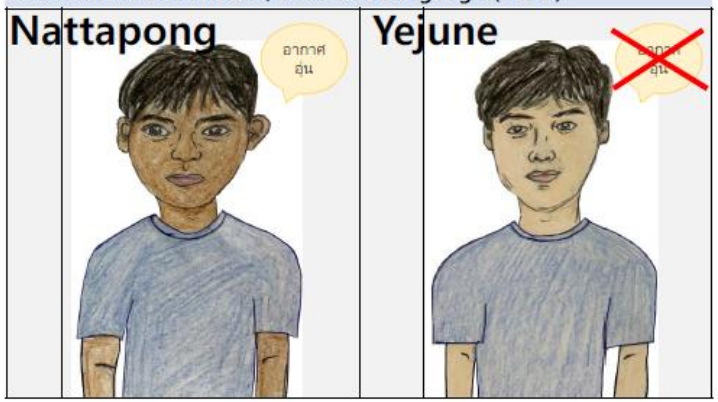




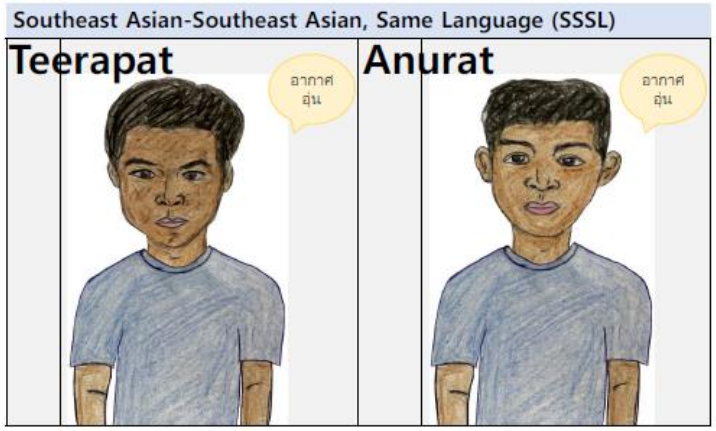
Korean-Southeast Asian, Same Language (KSSL)



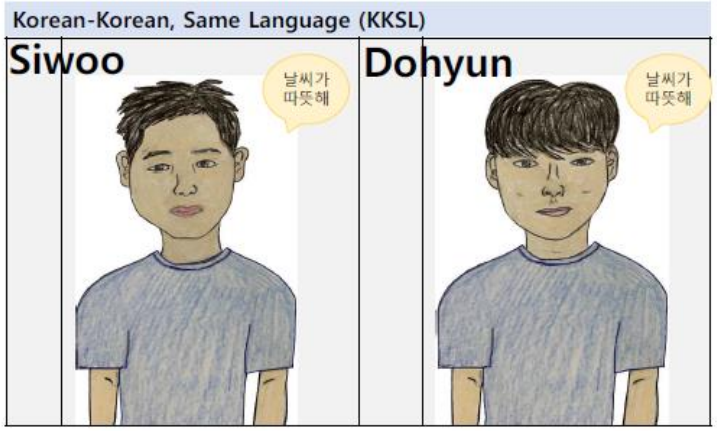
Southeast Asian-Korean, Different Language (SKDL)



Southeast Asian-Southeast Asian, Same Language (SSSL)



Korean-Korean, Same Language (KKSL)



Appendix C: Head Teacher Information Letter

[Head teacher name]

[School name and address]

[Date]

Dear [Head teacher name],

I am writing to enquire about conducting educational research in your school this May to July 2021. The research will be led by _____. The research aims to examine what is the information used by primary school children when they decide who they want as their friends. The study will focus on Korean children's attitudes and perceptions of similarity with children of different backgrounds.

1. Research background and purpose

The study starts from two basic questions regarding children's perception of diversity: Can children distinguish people from different cultural groups? What are their attitudes towards different groups? Given the growing population and diversity of groups in South Korea, understanding South Koreans' perception and attitudes toward different groups is crucial. As childhood is an important phase to intervene upon intergroup biases, more research is needed on how a child understands and accepts various members of their society. With this in mind, this study aims to examine how children see different social groups and their decision-making on friendship potential.

2. About the research

The study will be conducted by a student researcher who studies in the department of education at the University of Oxford. University of Oxford has strict procedures for conducting ethical research with teachers and young people, consistent with current British Educational Research Association guidelines. These procedures will be followed. The data will be published in a master's dissertation at the University of Oxford, and may also be published as an academic paper in a peer reviewed journal. However, details of all participants, including students, teachers and the school, would be made anonymous in all research reports. The data collected would be kept strictly confidential, available only to my supervisor and myself. This data will not be used for any other purposes other than those specified without the further consent of all involved.

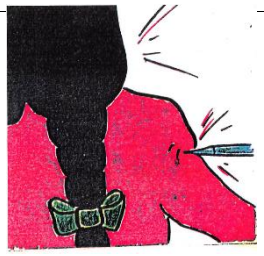
3. Participants

The study plans to recruit students in two age groups – first grade and third grade.

4. Methods

Before we begin, we will seek consent from parents/caregivers as well as ask children if they are happy to participate. Each participating child will be met for a thirty minutes session. These will be conducted between May and July. During the session, children will work with the researcher on two tasks that measure children's perception of diversity: 1) they have to sort picture cards with positive and negative adjective labels to different groups 2) they have to judge if pairs of children are similar and what is the friendship potential between them. Following are pictures from the sorting task:

This task presents picture cards that are linked to a positive or negative adjective (e.g. 'happy', 'smart', 'negative', 'messy'). There are three boxes placed in front of the child: a box with pictures of same-race child to the participant, a box with pictures of different-race child, and a box that represents 'no one' in case a child does not want to attribute certain adjective to any groups (See picture 1). As the task begins, the child will be presented with two copies of each adjective (See pictures 2 and 3). Children are asked a question (e.g. Who is kind?) and they choose the box they want to drop the card in.

		
1. Children are asked to sort picture cards in boxes.	2. Example of the positive picture cards for 'smart'.	3. Example of negative picture cards for 'mean'

Examples of picture cards for the sorting task with children.

The study does not aim to discuss children's personal experience regarding diversity and the researcher will not talk about any personal matters that may impact children's perception of diversity. Children's performance on how many adjectives were put into each box will be recorded during the session. Upon the school's request, a protocol that states the interview questions will be provided before the study. Once the study is over, a report of the overall findings will be provided to your school by the end of August.

5.Data collection

The participant's performance data will be anonymized as the child's name will be masked and replaced with number codes. The collected data will be stored in a password protected file in the researcher's password protected computer.

6.Suggested Timeline

Participant recruitment	2021. 05. 17 - 06. 06
Conducting interviews	2021. 05. 19 - 07. 09
Analysis and write-up	2021. 07. 10 - 08. 13
Sharing of results	2021. 08. 23 - 08. 31

7.Researcher Information

[Student researcher]
Name:
Affiliation: MSc in Child Development and Education, University of Oxford
Mobile:
Email:

If your school agrees to participate, please send the attached consent form to _____ by _____.

[Consent Form for head teacher]

Becoming friends - Understanding what decides children's friendship

[School name]

[School address]

[Head teacher name]

[Head teacher email]

[Date]

☐ We would like the first and third graders to take part in this project.

If you have any queries please don't hesitate to contact me.
If your school agrees to participate, please send this page of the consent form to _____ by _____.

Thank you for your help.

Head Teacher Information Letter - Korean

_____ 초등학교장 귀하,

안녕하세요? 올해 5월에서 7월에 영국 옥스퍼드 대학교 교육학과 ____ 교수가 진행하는 연구에 참여 제안을 드립니다. 본 연구는 초등학교 학생들이 친구 관계를 형성할 때 어떤 정보에 집중하는지에 대해 탐색하기 위한 연구이며 한국 아동들이 다양한 국가의 친구들을 향해 어떤 태도를 가지고 있는지, 서로 다른 집단의 아동들을 어떻게 구분하는지에 초점을 맞춰 진행합니다. 연구를 통해 다양한 친구에 대해 아이가 가지고 있는 생각을 자연스럽게 알아볼 수 있어 의미 있는 시간이 될 것입니다.

1. 연구 배경 및 목적

본 연구는 다음 두 가지와 같은 질문에서 시작합니다: 한국 아동은 친구를 사귈 때 어떤 특징에 집중할까? 다양한 외국인 집단을 향한 아동의 태도는 어떨까? 다양한 형태로 외국인들이 한국 사회에서 한 부분을 이루고 살아가고 있음을 고려할 때, 이들에 대한 한국인의 인식 및 태도 개선은 사회통합을 위해서 필수적인 과제입니다. 아동기에는 자신과 타인에 대해 이해함과 동시에 사회를 구성하는 다양한 집단에 대한 지식과 태도를 형성하게 되므로 아동이 다양한 배경의 사회 구성원을 어떻게 이해하고 받아들이는지 연구할 필요가 있습니다. 이에 본 연구는 다양한 사회 집단에 대한 아동들의 시선과 그들과의 친구관계 가능성에 대한 아동들의 의견에 대해 살펴볼 계획입니다.

2. 연구 소개

본 연구는 현재 영국 옥스퍼드 교육 대학원에서 석사 과정 중인 학생이 직접 진행합니다. 본 연구는 영국 교육연구위원회의 가이드라인을 따르는 옥스퍼드 대학교의 연구윤리위원회의 엄격한 심사를 받았습니다. 연구에서 수집된 데이터를 활용하여 학생 연구원은 옥스퍼드 대학교의 석사 논문을 제출할 계획이며, 추후 저널에 출판할 가능성도 있습니다. 허나, 학생명, 교사명, 학교명을 비롯한 참가자의 개인정보는 절대 노출되지 않으며 모든 보고서에 익명으로 처리됩니다. 수집된 데이터는 엄격하게 보관되며 지도교수와 학생 연구원에게만 접근권한이 있습니다. 본 연구를 위해 수집된 정보는 연구원의 졸업연구 목적으로만 이용됩니다.

3. 연구대상

연구 대상은 한국 초등학생 1학년과 3학년입니다.

4. 연구방법

연구를 시작하기에 앞서 연구자는 참여하는 학생의 학부모 동의서를 받을 것이며 각 학생에게도 참가 동의를 구할 것입니다. 연구는 연구 진행자 1명이 학생 1명을 대상으로 약 30분간 영상통화로 진행됩니다. 연구는 5월에서 7월 사이에 진행되며 다양성에 대한 아동의 인식을 알아볼 수 있는 두 가지 과제를 수행합니다: ①각 인종집단에 어울리는 형용사 선택하기 ②집단 간 유사성 판단 및 친구 관계 판단하기 입니다. 자세한 참여 과정의 한 가지 예시는 다음과 같습니다.

과제 예시) ①각 인종집단에 어울리는 형용사 선택하기

		
1. 유아에게 긍정/부정 형용사 카드를 제시한 후 각 인종에게 부여할 것을 안내한다.	2. 긍정 형용사카드 예시: 똑똑한	3. 부정 형용사카드 예시: 못된

본 과제는 긍정적인/부정적인 형용사가 그려진 그림카드와(예. '행복한', '똑똑한', '못된', '지저분한') 총 3개의 상자가 제시됩니다: 첫 번째 상자는 참가자와 같은 인종의 어린이 사진이, 두 번째 상자는 참가자와 다른 인종의 어린이 사진이 부착되어 있으며, 세 번째 상자는 '아무도 아닌 상자'(아무도 선택하고 싶지 않은 경우)의 글자가 적혀 있습니다. 학생에게 하나의 형용사에 대해 동일한 카드 2장을 제시하고 연구자의 안내에 따라 (예. '행복한' 카드 두 장 제시 후, "이 중에서 행복한 친구들은 누구일까요?") [그림 1]과 같이 본인이 원하는 대로 총 3개 박스에 카드를 배분합니다.

본 연구는 다양성에 대한 아동의 개인적 경험을 묻지 않으며, 그들의 인종 인식을 탐색하는 데에 본 연구의 목적이 있습니다. 또한 연구자는 참가자의 인종 인식에 영향을 줄 수 있는 어떠한 발언도 하지 않을 것입니다. 각 상자에 들어간 그림카드의 개수가 기록될 것이며 추후 분석에 활용될 것입니다. 학교의 요청에 따라 연구 진행 전, 학생과의 면접 과정이 적힌 인터뷰 대본을 제공할 것입니다. 또한 연구가 끝난 후, 8월 말에 연구 결과 요약본을 제공할 예정입니다.

5. 데이터 수집

참가자의 응답은 무기명으로 기록되며 참가자의 이름이 아닌 고유번호로 기록됩니다. 수집된 데이터는 암호로 보호된 노트북 속 암호화된 폴더 안에 저장됩니다.

6. 연구 계획

참가자 모집	2021. 06. 10 – 06. 25
인터뷰 진행	2021. 06. 11 – 06. 30
결과 분석 및 보고서 작성	2021. 07. 01 – 08. 13
보고서 요약본 공유	2021. 08. 23 – 08. 31

7. 연구자 정보

[학생연구원]
성 명:
소 속: 옥스퍼드 대학교 교육학과(Child Development and Education) 석사 과정
번 호:
이메일:

본 연구에 본교 학생들이 참가하는 것에 동의하신다면, 동의서를 작성하신 후 _____로 스캔본을 전달해주시기 바랍니다.

[연구 참여 동의서]

연구명: 아이들의 친구 관계: 친구 관계에 영향 미치는 특징 이해하기

연구자:

[학 교 명]

[학교 주소]

[교 사 명] (인)

[이 메 일]

[날 짜]

□ 본교 1학년 및 3학년 학생들이 연구 참여하는 것에 동의합니다.

다른 문의사항이 있을 경우 언제든 연구자에게 연락주시기 바랍니다.

연구에 참여해주셔서 진심으로 감사드립니다.

Appendix D: Information Letters for Parents and Children

(1) Parental information letter

Becoming friends - Understanding what decides children's friendship

I am writing to invite you to an educational research conducted by a student researcher from the University of Oxford from May to July 2021. The research will be led by ____.The research aims to examine Korean children's attitudes and perceptions toward children of different backgrounds.

8. What is the study about?

As friendship impacts children's social, linguistic, and emotional development, this study aims to examine factors that promote friendship with children of different backgrounds. As childhood is an important phase to intervene upon intergroup biases, more research is needed on how a child understands and accepts various members of their society. With this in mind, this study aims to examine how children see different social groups and their decision-making on friendship potential.

9. When will my child participate in the study?

The study will be done from May to July, 2021.

10. Who will participate in the study?

First graders and third graders in primary school will participate in the study.

11. Could the research help my child?

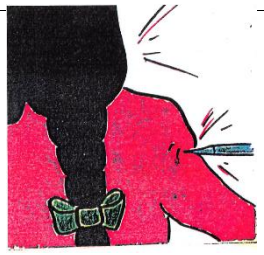
The study may not help your child but it may help other children in the future. To thank you for being in the study, we will give you a book gift card worth $5. Moreover, once the study analysis is over, the study outcome on primary school children's thoughts on friendship will be shared to each household in August. Participation is voluntary.

12. What will my child do in the study?

Before we begin, we seek consent from parents and children through this information sheet. If you are happy to participate, we will schedule a convenient time. Your child will be met for a 1:1 thirty minutes session online. During the session, children will work with the researcher on two tasks that measure children's perception of diversity: 1) they have to sort picture cards with positive and negative adjective labels to different groups 2) they have to judge if pairs of children are similar and what is the friendship potential between them. Following are pictures from the sorting task:

This task presents picture cards that are linked to a positive or negative adjective (e.g. 'happy', 'smart', 'negative', 'messy'). There are three boxes placed in front of the child: a box with pictures of same-race child to the participant, a box with pictures of different-race child, and a box that represents 'no one' in case a child does not want to attribute certain adjective to any groups (See picture 1). As the task begins, the child will be presented with two copies of each adjective (See pictures 2 and 3). Children are asked a question (e.g. Who is kind?) and they choose the box they

want to drop the card in.

		
4. Children are asked to sort picture cards in boxes.	5. Example of the positive picture cards for 'smart'.	6. Example of negative picture cards for 'mean'

Examples of picture cards for the sorting task with children.

13. What will I need to prepare?

As this is an online meeting, an electronic device (computer, laptop, tablet, etc.) that has good camera and microphone will be needed. Smartphones are not recommended as the screen is too small to work on the tasks. To make sure that the child can concentrate in the session, a child should be in a quiet room with stable internet connection.

14. Where will the study data be used?

The data will be published in a master's dissertation at the University of Oxford, and may also be published as an academic paper in a peer reviewed journal. However, details of all participants, including students, teachers and the school, would be made anonymous in all research reports. The child's name will not be recorded as the child's name will be masked and replaced with number codes. The study does not aim to discuss children's personal experience regarding diversity and the researcher will not talk about any personal matters that may impact children's perception of diversity. All data will be destroyed after three years and the contact details will be deleted as soon as the study is over. The study follows the strict guideline of the University of Oxford's research ethics committee.

15. Researcher information

Please do not hesitate to contact me if you have more questions.

[Student researcher]

Name:

Affiliation:

Mobile:

Email:

If you are happy for child's participation, please follow the Qualtrics link below and fill out the consent form by _____.

(2) Child information leaflet

Dear Student,

My name is___. I am a research student at the University of Oxford. I would like to understand how you think about children from different countries and how you decide to become friends with others.

This leaflet explains what we will be doing. Please read it carefully with your parents.

1. What will we do?

I will ask you questions after showing you some photos and pictures of children from different countries. It is not homework or a test. There will be no right or wrong answers. I just want to talk to you about friends from different countries. We will have online video-call fo 30 minutes.

2. Do I have to participate?

You can choose not to participate. Even if you decide to participate now and change your mind later, that is okay. This will not affect your learning or your grades in school.

3. Could the research help me?

The study will not help you but it might help other children in the future.
To thank you for being in the study, we would give you a book gift card. You should talk with your parents about how you would like to use this.

4. I have questions!

You can ask questions to me at any time. If you want to be in the research, please let your parents know.

Thank you for reading this. I hope to see you soon! ☺

Information Letters for Parents and Children - Korean

(1) Parental information letter

연구명. 반편견 교육을 위한 기초연구: 아동의 친구 관계에 대한 탐색적 연구

안녕하십니까, 올해 5월에서 7월에 영국 옥스퍼드 대학교 교육학과 학생 연구원이 진행하는 초등학생의 친구 관계에 관한 연구에 참여 제안 드립니다. 이 연구는 영국 옥스퍼드 대학교 교육학과의 __ 교수 지도 하에 진행되는 연구로, 한국 아동들이 다양한 집단의 친구들을 향해 어떤 인식을 가지고 있는지에 대한 연구입니다.

어떤 연구인가요?

다양한 친구관계는 아동의 사회성과 언어발달 및 정서발달에 중요한 영향을 미치기 때문에 아동이 다양한 집단과 교류하며 성장할 수 있도록, 친구 관계를 장려하는 요인에 대해 연구하고자 합니다. 아동기에는 자신과 타인에 대해 이해함과 동시에 사회를 구성하는 다양한 집단에 대한 지식과 태도를 형성하게 되므로 아동이 다양한 배경의 사회 구성원을 어떻게 이해하고 받아들이는지 연구할 필요가 있습니다. 이에 본 연구는 다양한 사회 집단에 대한 아동들의 시선과 그들과의 친구관계 가능성에 대한 아동들의 의견에 대해 살펴볼 계획입니다.

언제 참여하나요?

연구기간은 2021년 5월부터 7월입니다.

누가 참여하나요?

연구의 대상자는 초등학교 1학년과 3학년 학생입니다.

연구가 제 아이에게 도움이 되나요?

연구가 참여 아동에게 직접적인 도움이 되진 않을지라도 미래 세대 아이들에게는 도움이 될 수 있습니다. 참가 학생에게는 감사의 의미로 컬쳐랜드 문화상품권 5000원권을 지급합니다. 또한 연구가 끝난 후에는 초등학생들이 생각하는 친구관계에 대한 연구 참여 결과를 요약해서 8월 중에 각 가정에도 공유할 예정입니다. 참가는 의무는 아닙니다..

연구에서는 어떤 것을 하게 되나요?

우선 연구원이 본 설명문을 통해 연구에 대해 소개한 후 연구 참여 동의서를 받습니다. 연구에 동의하시고 연구원과 참가 날짜를 합의하신 후에 연구가 시작됩니다. 연구원이 귀하의 자녀와 함께 1:1로 2가지 과제를 수행하며 약 30분간 간단한 과제를 수행하며 이야기를 나눌 예정입니다. 진행할 과제는 그림과 사진을 함께 활용하여 초등학교 저학년에게 어렵지 않은 수준으로 진행합니다. 진행할 과제 종류는 ①각 인종집단에

어울리는 형용사 선택하기, ②집단 간 유사성 판단 및 친구 관계 판단하기로, 총 2가지입니다. 자세한 참여 과정의 한 가지 예시는 다음과 같습니다.

과제 예시) ① "각 인종집단에 어울리는 형용사 선택하기"

긍정적인/부정적인 형용사가 그려진 그림카드와(예. '행복한', '똑똑한', '못된', '지저분한') 총 3개의 상자가 제시됩니다: 첫 번째 상자는 참가자와 같은 인종의 어린이 사진이, 두 번째 상자는 참가자와 다른 인종의 어린이 사진이 부착되어 있으며, 세 번째 상자는 '아무도 아닌 상자'(아무도 선택하고 싶지 않은 경우)의 글자가 적혀 있습니다. 학생에게 하나의 형용사에 대해 동일한 카드 2장을 제시하고 연구자의 안내에 따라 (예. '행복한' 카드 두 장 제시 후, "이 중에서 행복한 친구들은 누구일까요?") [그림 1]과 같이 본인이 원하는 대로 총 3개 박스에 카드를 배분합니다.

		
1. 유아에게 긍정/부정 형용사 카드를 제시한 후 각 인종에게 부여할 것을 안내한다.	2. 긍정 형용사카드 예시: 똑똑한	3. 부정 형용사카드 예시: 못된

무엇을 준비해야 하나요?

본 연구는 온라인 화상 인터뷰로 진행하므로, 참가 학생의 얼굴이 잘 보일 수 있는 카메라와, 목소리가 잘 들릴 수 있는 마이크가 내장된 전자기기(컴퓨터, 노트북, 태블릿 등)가 필요하며, 참가 학생이 집중할 수 있도록 인터넷 연결이 잘 되어있는 별도의 조용한 공간이 필요합니다. 핸드폰은 화면이 작아 과제 수행이 어려울 수 있으므로 가급적 지양해주시기 바랍니다.

연구는 어디에 활용되나요?

본 연구를 위해 수집된 귀하와 귀하의 자녀에 대한 정보는 연구원의 졸업연구 목적으로만 이용됩니다. 개인식별이 가능한 정보 없이 참가자 고유 번호로만 관리되며, 개인 정보가 아닌 집단 정보로 분석 처리됩니다. 인터뷰는 아동의 개인 경험에 대해 일체 질문하지 않으며, 사진으로 제시되는 가상인물에 대한 아동의 인식만을 살펴봅니다. 수집한 자료는 연구 종료 3년 후에 모두 파기됩니다. 본 연구는 옥스퍼드 대학교 연구윤리위원회의 엄격한 심사를 거쳐 승인 받은 연구입니다.

문의

본 연구와 관련하여 문의사항이 있으시면 학생연구원에게 언제든 문의주시기 바랍니다.

[학생연구원]

성 명:
소 속:
번 호:
이메일:

※참여를 희망하시면 아래 Qualtrics 링크에 접속하셔서 _____까지 동의서를 작성해주시기 바랍니다. .

(2) Child information leaflet

학생용 안내서

안녕하세요, 저는 영국 옥스퍼드 대학교에서 공부 중인 ____이라고 해요.
초등학생 여러분들은 친구를 사귈 때 어떤 을 중요하게 생각하는지, 다른 나라 친구에 대해서는 어떤 생각을 가지고 있는지 궁금해서 여러분과 만나려고 해요.

이 설명서는 제가 여러분이랑 무엇을 할지에 대해 적혀있어요. 부모님과 함께 읽어보세요.

1. 무엇을 하게 되나요?

다른 나라의 친구들 그림을 보여준 후 몇 가지 놀이를 할 거에요. 이건 숙제도 아니고 시험도 아니고, 정답이 있는 놀이가 아니랍니다.

영상통화로 30분 동안 편하게 다른 나라 친구들에 대한 여러분의 생각을 얘기해주면 돼요.

2. 꼭 참여해야 하나요?

원하지 않으면 참여하지 않아도 돼요. 지금은 참여하기로 마음 먹었다가 나중에 마음을 바꿔도 괜찮아요. 참여하지 않는다고 해서 여러분의 학교 성적에 안 좋은 영향을 끼치지 않을 겁니다.

3. 참여하는 것이 제게 도움이 되나요?

연구가 여러분에게 큰 도움이 되지 않을 수도 있어요. 그러나 나중에 이 연구가 여러분과 같은 어린이들에게 도움이 될 수 있어요.

연구에 참여해주면 문화상품권을 드립니다. 부모님과 상의해서 문화상품권을 잘 활용해보세요.

4. 질문이 있어요!

이해가 되지 않는 말이 있다면 언제든 제게 질문을 해도 됩니다. 연구에 참여하고 싶다면 부모님께 얘기해주세요.

읽어주셔서 감사합니다.
그럼 곧 봐요. ☺

Appendix E: Online Survey and Consents

English

INTRODUCTION

Hello, this study is led by Department of Education, Oxford University, UK. This is a study to explore what traits first and third grade students in primary school focus on when making friends. The research is conducted for about 30 minutes with a Korean researcher over a video call.

If you participate, we will give you a book gift card worth KRW 5,000 as a token of appreciation. Research results will also be shared with participating families at the end of August.

It will be a meaningful time to examine what your child thinks about various friendships.

Please refer to the Information sheet below for more details on the process.

If you consent to your child's participation in the study, please click 'Next' to fill out the consent form and complete the short parental survey. (takes about 3 minutes)

Thank you.

For more information about the research, please download and check the 'Information Sheet' below or contact the researcher.

연구 참가 안내서

What grade is your child?

- ○ First Grade
- ○ Third Grade
- ○ Second, Fourth, Fifth, Sixth Grade (unable to participate)

CONSENT

[Parental Consent From]

If you agree to the terms below, please click the Agree button and continue to the child consent form.

- I have read the information sheet and give permission for your child to participate in the study.
- I understand that participation is voluntary and I may withdraw my participation if I change my mind in the future.
- I have the contact information of the researcher for future enquiries. (Contact information is provided on the las page of the questionnaire.)

- ○ I agree to the above.
- ○ I do not agree with the above.

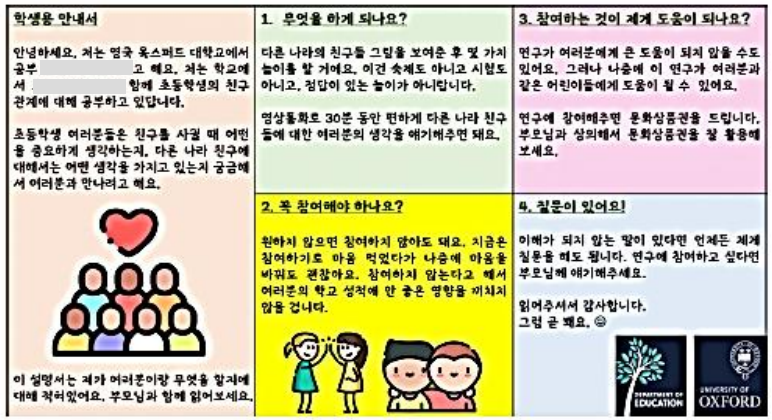
[Student Consent Form]

This page asks for the child's consent. Only a child who agreed to the below terms and read the information sheet can participate in the study..

Have you read the information sheet?

- ○ Yes
- ○ no

▼ Child information sheet



Do you understand what this project is about?

- ◯ Yes
- ◯ no

Have you asked all the questions you want?

- ◯ Yes
- ◯ no

Do you understand that if you want to stop while participating in a study, you can stop at any time?

- ◯ Yes
- ◯ no

Are you happy to take part?

- ◯ Yes
- ◯ no

DEMOGRAPHIC

If both the parent and the participating child agree to the child's participation in the project, we ask the parent **to fill out a short questionnaire (takes about 3 minutes)**

- The year of birth and month of birth are collected to average the ages of participating child.

* After the participants are confirmed and the schedule is adjusted, all personal information will be destroyed and all student responses during the study will be anonymized.

What is your child's name?

Please select your child's year of birth.

Please select your child's birth month.

What is your child's gender?

- ○ male
- ○ female

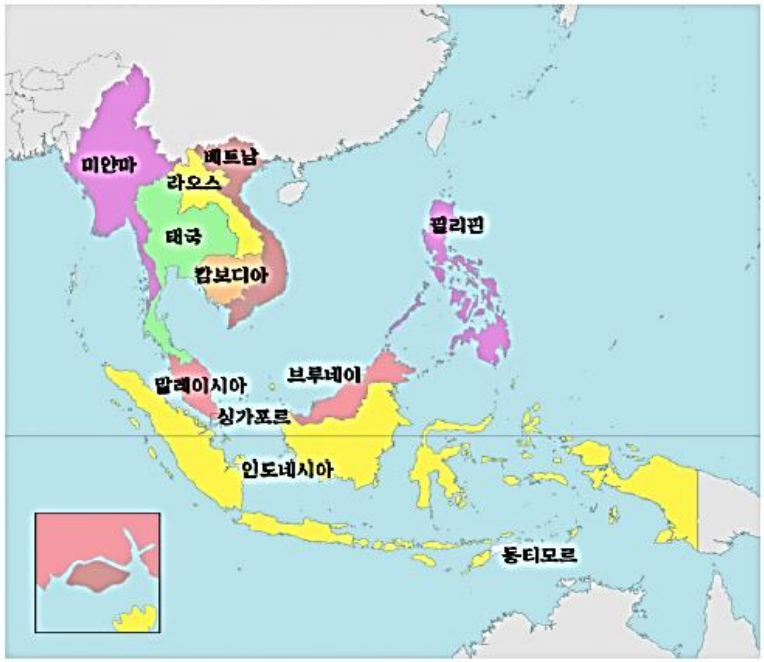
Where does your child live? (e.g., Hwaseong-si, Gyeonggi-do)

INTERRACIAL EXPERIENCE

During the study, the participating students will be shown drawings of Southeast Asian children.

Southeast Asia, as discussed in the study, includes Thailand, the Philippines, Vietnam, Indonesia, Singapore, Malaysia, Myanmar, Cambodia, Laos, Brunei, and East Timor.

The questions below are intended to find out if students have experience in various countries.



Has your child ever met people from Southeast Asia? (including media such as TV)

Never ○ Rarely ○ Sometimes ○ Often ○

Where does your child meet people from Southeast Asia? (Multiple responses possible)

- ☐ School: Teacher
- ☐ School: Friends
- ☐ Extracurricular institutions

- [ ] Family
- [ ] Neighborhood
- [ ] Media
- [ ] Overseas Travel
- [ ] Other

How many Southeast Asian friends has your child made?

- ○ None
- ○ One
- ○ Two
- ○ Three
- ○ Four or more

Has your child ever received multicultural education at school or through extra-curricular activities?

- ○ None
- ○ Once
- ○ Twice or more

When did your child receive multicultural education?

- [ ] 2021
- [ ] 2020
- [ ] 2019
- [ ] 2018
- [ ] 2017
- [ ] 2016 or earlier

SCHEDULING

The session will be conducted through a video call for about 30 minutes. The tasks in the session are not difficult for both first and third grade students. We do not ask children's personal experience but rather ask children's opinion on fictional characters.

* Video calls utilize Microsoft Teams, which do not requrie signup and is easy to use. The participation link will be provided at a later date.

Please select all preferred days to participate in the study. (Multiple responses are possible, if you do not have preference, leave blank)

- [ ] Monday
- [ ] Tuesday
- [ ] Wednesday
- [ ] Thursday
- [ ] Friday
- [ ] Saturday
- [ ] Sunday

Do you have a preferred time? (If none, leave blank)

Please enter **the parent's mobile phone number** to coordinate the study participation schedule, receive video call link and book gift card.

(※Contact information is not saved and will be deleted immediately upon completion of the study)

We sincerely thank you for participating in the study. **Click the blue arrow at the bottom one last time to submit the questionnaire.**

For inquiries, please contact us at

(email address)

or (phone number)

We will contact you shortly. Thank you.

Online Survey and Consents - Korean

한국어

INTRODUCTION

안녕하세요, 이 연구는 영국 옥스포드 대학교 교육학과 _____가 지도하는 연구입니다. 초등학교 1학년, 3학년 학생들이 친구를 사귈 때 어떤 특징에 집중하는지에 대해 탐색하기 위한 연구이며, 그림을 활용하여 초등학교 저학년생에게 어렵지 않은 수준으로 진행됩니다. 연구는 영상통화로 한국인 연구원과 약 30분간 진행합니다.

참여해주시면 감사의 의미로 문화상품권 5천원권을 드립니다. 연구 결과 또한 8월말에 참여 가정에 공유될 예정입니다.
다양한 친구관계에 대한 자녀의 생각을 자연스럽게 알아볼 수 있는 의미있는 시간일 것입니다.
진행 과정에 대한 더 자세한 내용은 연구 안내서를 참고해주시기 바랍니다.

귀하의 자녀가 연구에 참여하는 것을 동의하신다면 '다음'을 눌러 동의서를 작성하신 후 짧게 구성된 학부모용 사전 설문지를 작성해주시기 바랍니다. (설문지 약 3분 소요)

감사합니다.

연구에 대해 더 궁금하신 내용은 아래 '연구 참가 안내서'를 다운 받으셔서 확인하시거나 언제든 연구원에게 문의주세요.

연구 참가 안내서

귀하의 자녀는 몇학년입니까?

- ○ 1학년
- ○ 3학년
- ○ 2,4,5,6학년 (참여 불가)

CONSENT

[학부모용 동의서]

아래 내용에 동의하신다면 동의 버튼을 클릭 후 참여 학생용 동의서도 작성해주시기 바랍니다.

- 귀하는 연구 설명문을 숙지하였고, 귀하의 자녀가 연구에 참여할 것을 허락합니다.
- 자발적인 참여이며, 추후에 생각이 바뀔 경우 참여를 철회할 수 있음을 이해합니다.
- 연구에 대한 문의사항이 있을 경우 연락할 수 있는 연구자의 연락처를 안내 받았습니다. (연락처는 설문지 마지막 장에 안내되어 있습니다.)

- ○ 위 내용에 동의합니다.
- ○ 위 내용에 동의하지 않습니다.

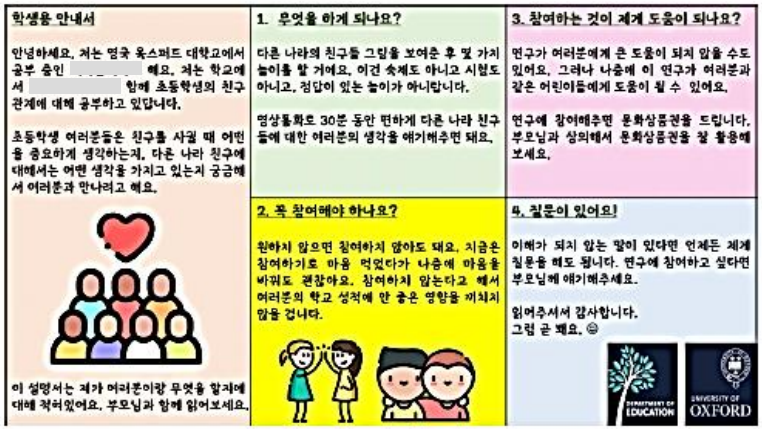
[학생용 동의서]

이 페이지는 학생의 동의를 구하는 페이지입니다. 아래 문항에 모두 동의하는 경우에만 연구에 참여 가능합니다.

연구 안내서를 읽어봤나요?

- ○ 예
- ○ 아니요

▼ 학생용 연구 안내서



연구 내용이 이해되나요?

- ◯ 예
- ◯ 아니요

궁금한 내용이 있다면 주변 어른들께 물어봤나요?

- ◯ 예
- ◯ 아니요

연구에 참여하는 동안 멈추고 싶다면 언제든 멈출 수 있다는 것을 이해하나요?

- ◯ 예
- ◯ 아니요

연구에 참여할 것인가요?

- ◯ 예
- ◯ 아니요

DEMOGRAPHIC

학부모와 참여학생 모두 학생의 연구 참여에 동의하신다면, **학부모님께서 사전 설문지 작성 부탁드립니다. (약 3분 소요)**

- 출생 연도와 출생 월은 참가 학생들의 연령을 평균 내기 위함입니다.

* 참가자가 확정이 되고 일정이 조율된 후에는 학생의 개인 정보는 모두 파기되며 연구 중 학생의 응답은 모두 익명 처리됩니다.

자녀의 이름은 무엇입니까?

자녀의 출생 연도를 선택해주세요.

자녀의 출생 월을 선택해주세요.

자녀의 성별은 무엇입니까?

○ 남
○ 여

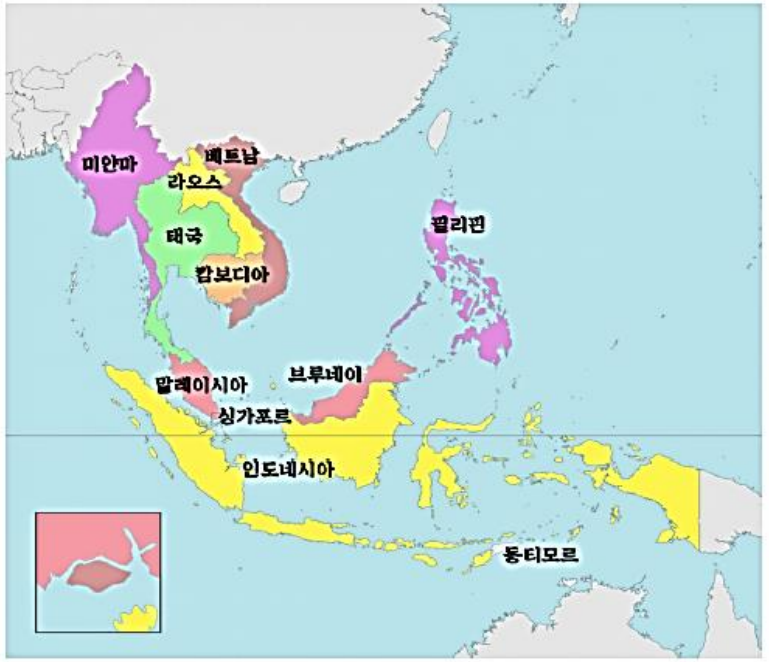
자녀가 거주 중인 지역은 어디입니까? (도시명까지만 입력 ex. 경기도 화성시)

INTERRACIAL EXPERIENCE

연구 중 참가 학생에게 동남아시아 어린이들의 그림을 보여줄 예정입니다.

연구에서 얘기하는 동남아시아란 태국, 필리핀, 베트남, 인도네시아, 싱가포르, 말레이시아, 미얀마, 캄보디아, 라오스, 브루네이, 그리고 동티모르를 포함한 지역입니다.

아래 사진질문들은 학생들이 다양한 국가에 대한 경험이 있는지 알아보기 위함입니다.



자녀가 동남아시아 출신의 사람들을 만난 적이 있습니까? (TV 등의 미디어를 포함하여)

○ 전혀 없음 ○ 거의 없음 ○ 가끔 있음 ○ 자주 있음

자녀가 어디서 동남아시아 출신의 사람들을 만나나요? (복수응답 가능)

☐ 학교: 교사
☐ 학교: 친구들
☐ 학원

☐ 가족
☐ 이웃
☐ 미디어
☐ 해외여행
☐ 기타

자녀가 몇 명의 동남아시아 친구들을 사귄 적이 있나요?

○ 전혀 없음
○ 한 명
○ 두 명
○ 세 명
○ 네 명 이상

자녀가 학교 혹은 학교 외 활동으로 다문화교육을 받아본 적이 있습니까?

○ 전혀 없음
○ 한 번
○ 두 번 이상

언제 다문화 교육을 받았습니까?

☐ 2021년
☐ 2020년
☐ 2019년
☐ 2018년
☐ 2017년
☐ 2016년 혹은 이전

SCHEDULING

연구는 약 30분간 영상통화로 진행할 예정입니다. 초등학교 1학년과 3학년 모두에게 어렵지 않은 질문들이며 학생의 개인적 경험을 묻기보다는 가상 인물에 대한 학생의 생각을 물어봅니다.

* 영상 통화는 회원가입이 필요없는 간편한 Microsoft Teams 을 활용합니다. 참가 링크는 추후에 전달해드릴 예정입니다.

연구 참여 선호 요일을 모두 선택해주세요. (복수응답 가능, 없으시면 빈칸으로 두셔도 됩니다)

☐ 월요일
☐ 화요일
☐ 수요일
☐ 목요일
☐ 금요일
☐ 토요일
☐ 일요일

선호하시는 시간대가 있으신가요? (없으시면 빈칸으로 두시면 됩니다)

연구 참여 일정 조율, 영상 통화 접속 링크 및 문화상품권 전달을 위해 **학부모님의 휴대폰 번호** 기입 부탁드립니다.
(※연락처는 저장되지 않으며 연구 종료 즉시 삭제됩니다)

연구에 참여해주셔서 진심으로 감사드립니다. **하단의 파란색 화살표를 마지막으로 한 번 더 클릭하여 설문지를 제출해주세요.**

문의사항은,
(EMAIL) 혹은
(PHONE) 로 연락주시기 바랍니다.

연구 참여 안내를 위해 곧 연락드리겠습니다. 감사합니다.

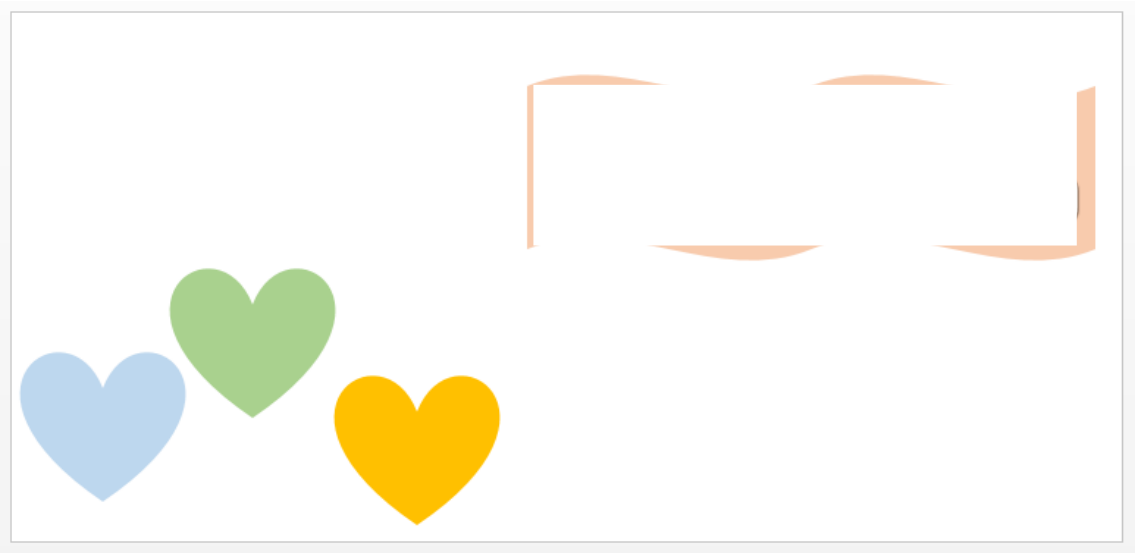
Appendix F: Data Collection Protocol

Introduction

Hello, my name is _____. Nice to meet you. Can you hear and see me well?

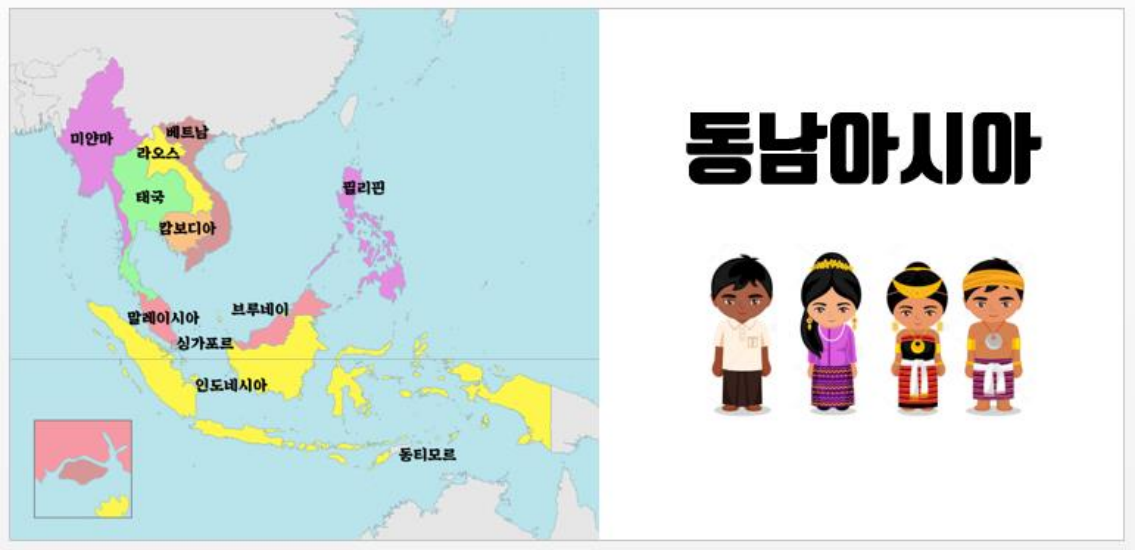
[Check if the screen is visible to the participant]

Can you tell me how many hearts drawn on the screen? What colour are they?



[Change the screen that has Southeast Asian map, "Southeast Asia" and illustration]

Now I am going to show you a map. Have you heard of Southeast Asia (*Dongnam Asia*)? Countries such as Thailand, the Philippines, Singapore, and Vietnam are called Southeast Asia. Rice noodles, Pad Thai, and banh mi sandwiches that we eat a lot are all popular foods in Southeast Asia. Some Southeast Asians look like this.



From now on, I will ask you what you think of people from different countries. Do you have any questions before we start? If you have any questions, you can always ask me. Also, you can always stop participating if you want to.

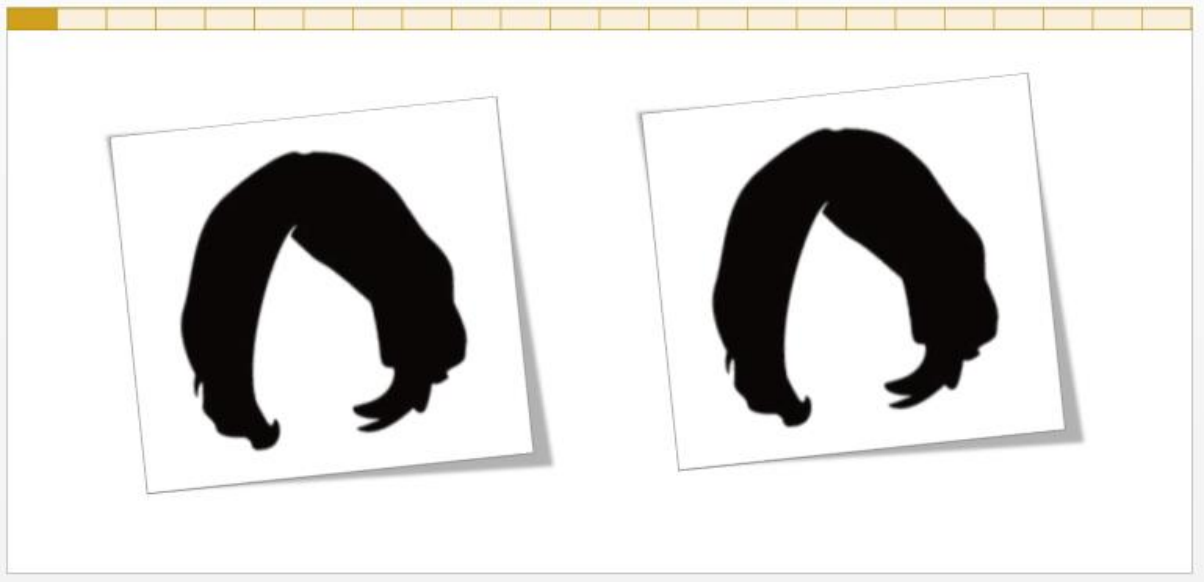
[Change the screen to drawings of the peers]

Today we will do two activities together. You've probably never met the children in the picture here. Still, I'm curious what you think of these children. I did not write your name down. This means that whatever you answer is a secret. Are you ready? So let's get started.

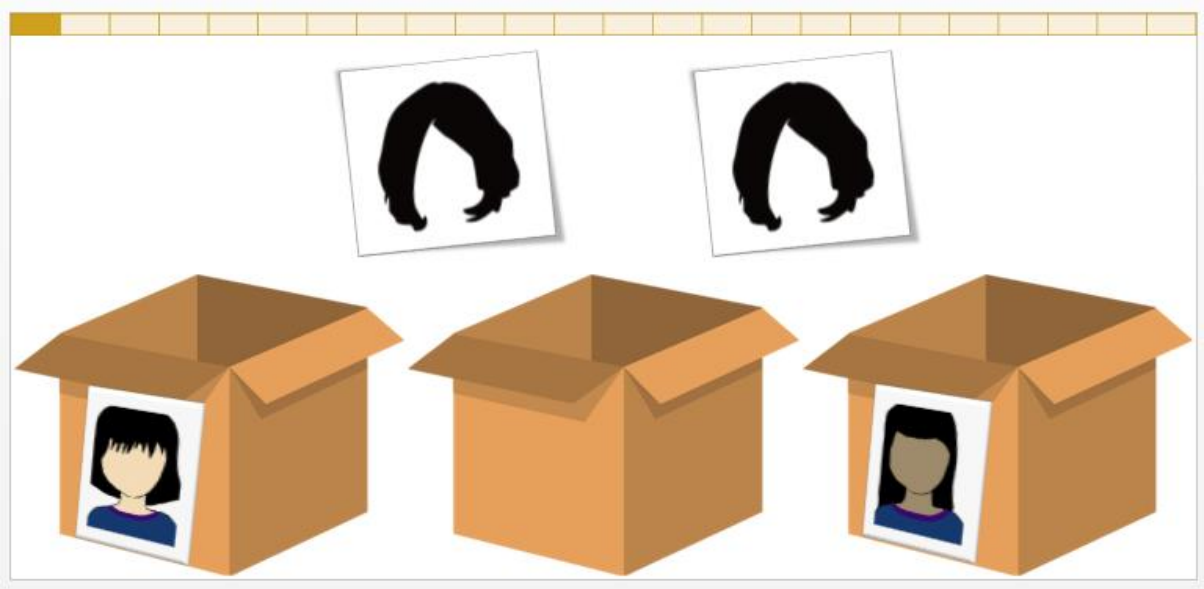
Multi-Response Racial Attitude Measure (MRA)

See the three boxes here? This box is for a Korean child, and this one is for a Southeast Asian child. This empty box doesn't belong to anyone. If the picture on the screen goes with a Southeast Asian child, it goes into the Southeast Asian box, if it goes with a Korean child, it goes in the Korean box, if it doesn't belong to anyone, it goes into the empty box. You can tell me where to put the pictures.

[Warm-up trial]: Let's practice. Here are two pictures of black hair.



Which of these children have black hair? Is it the Southeast Asian child? Korean child? Both or none? Tell me. *[Move the pictures according to the child's answer]*

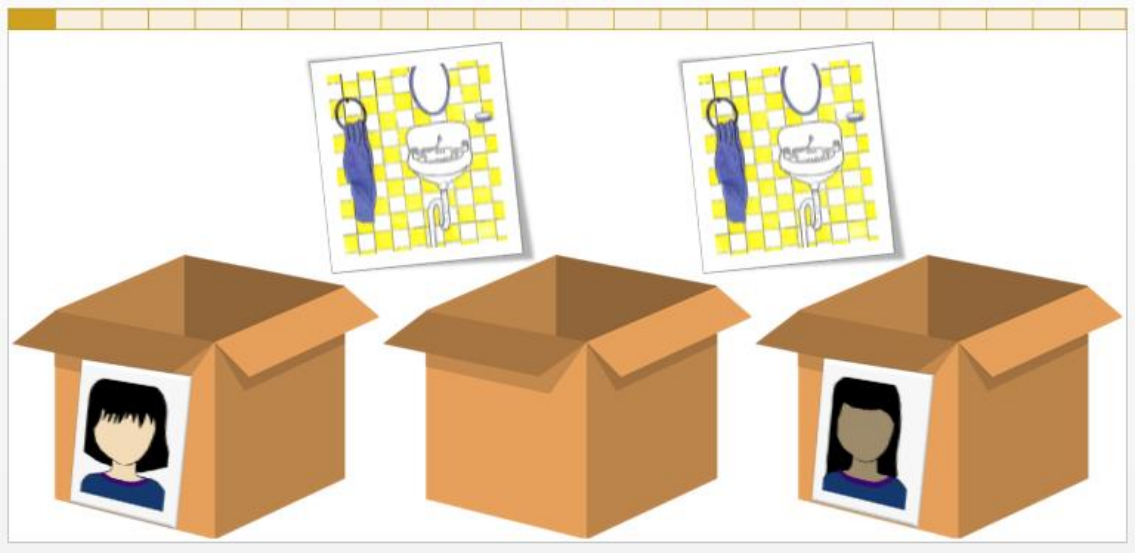


Now, I will show you a picture that describes someone's behaviour. Just like we did now, tell me where the picture goes to. Guess if a Korean or Southeast Asian or both or none of them will show such behaviour. I'm asking your opinion, so there's no wrong answer. All are correct. Just answer honestly. *[Point to the task progress bar on top of the screen]* We will do the first activity until the bar here becomes completely brown. Let's begin.

[Proceed with 24 questions, giving the sets of 2 picture cards which reading the behavioural description of each attribute.]

1. CLEAN: Some children are clean. They don't forget to wash their hands before eating. Who is clean?

Is it the Korean child, the Southeast Asian child, none or more than one of them who is clean? Tell me who is clean.



[Slide changes per every attribute]

2. UNFRIENDLY: Some children are unfriendly. They are always pushing other children around and getting into fights. Who is unfriendly? Is it the Southeast Asian child, the Korean child, none or more than one of them who is unfriendly? Tell me who is unfriendly.

3. MEAN: Who is mean and always poking other children? Is it the Korean child, the Southeast Asian, none or more than one of them who is mean? Tell me who is mean.

4. WONDERFUL: Some children are wonderful. They are like Superheroes. Who is wonderful? Is it the Southeast Asian child, the Korean child, none or more than one of them who is mean? Tell me who is wonderful.

5. LIKES TO WALK: Some children like to run. Who likes to run?

6. DIRTY: Some children have dirty hands and put finger marks everywhere. Who is dirty?

7. HEALTHY: Some children are healthy. They are not sick and full of energy. Who is healthy?

8. GOOD: Some children are good and do the right thing like keeping their room tidy and listen to their parents. Who is good?

9. CRUEL: Some children are cruel. They throw rocks at little cats. Who is cruel?

10. STUPID: Some children do stupid things like pulling all the toilet paper in a bathroom. Who is stupid?

11. POLITE: Some children are polite. When they receive a present like this one they remember to say thank you. Who is polite?

12. LIKES TO SING: Some children like to sing. Who do you think likes singing?

13. HAPPY: Some children are happy. They smile and laugh a lot. Who is happy?

14. SELFISH: Some children are selfish. They like to keep things to themselves and they don't share. Who is selfish?

15. SICK: Some children are often sick. They miss school and cannot play with their friends because they have to stay in bed. Who is sick?

16. POPULAR: Some children have a lot of friends because they are fun to be with. Who is popular?

17. LIKES TV: Many children like watching T.V. Who likes watching T.V.?

18. NAUGHTY: Some children are naughty. They often do things like drawing on the wall with crayons and don’t follow the rules. Who is naughty?

19. KIND: Some children are kind. They bring flowers to their friends. Who is kind?

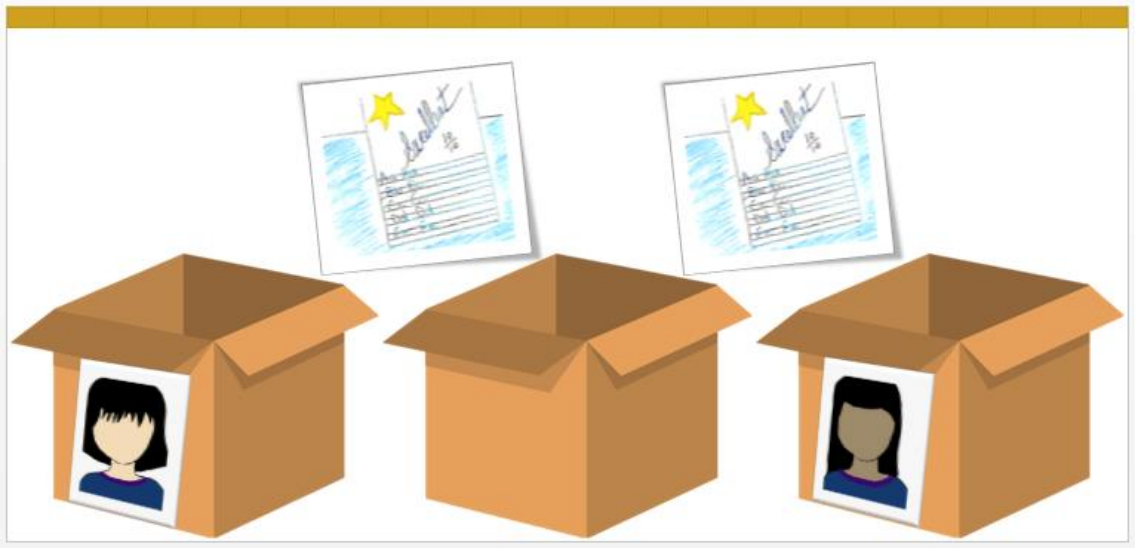
20. WON’T LET OTHERS PLAY: Some children won’t let others play. They tell them “go away, we won’t let you play with us.” Who won’t let others play?

21. LIKES MUSIC: Many children like to listen to music. Who likes to listen to music?

22. BAD: Some children do bad acts. They steal things and lie. Who is bad?

23. HELPFUL: Some children are helpful. They help people in need. Who is helpful?

24. SMART: Some children are smart. They do homework and answer teacher’s question well. Who is smart?



Transition

You did very well. Now, we will do one last activity. Again, there is no wrong answer for this activity. You only need to be honest. Do you have any question? Please let me know if you want to stop. If not, the last activity will begin and will be done until the bar on the top is completely filled with green colour. Are you ready?

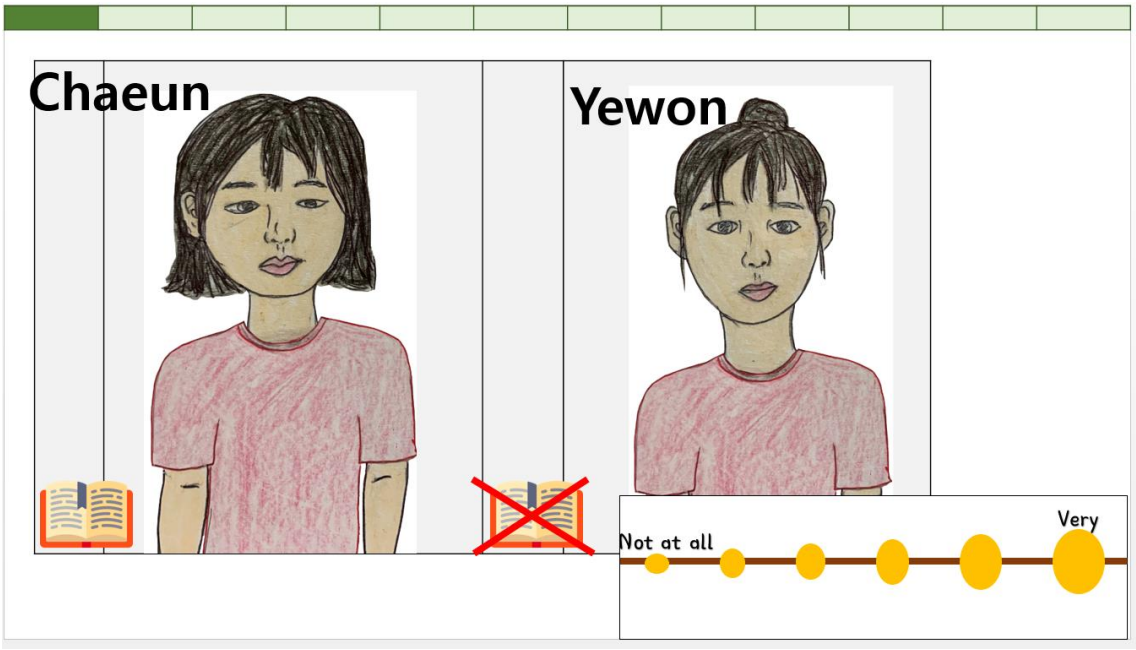
Similarity Task (ST) – Set 1 (Race with Hobby)

[Proceed with 6 peer dyads, K=Korean, S=Southeast Asian, DH=Different Hobby, SH=Same Hobby]

1. KKDH: Here is a picture of Chaeun and here is a picture of Yewon. Chaeun likes to read book. Yewon doesn't like to read book.

Q1. How much alike are Chaeun and Yewon?

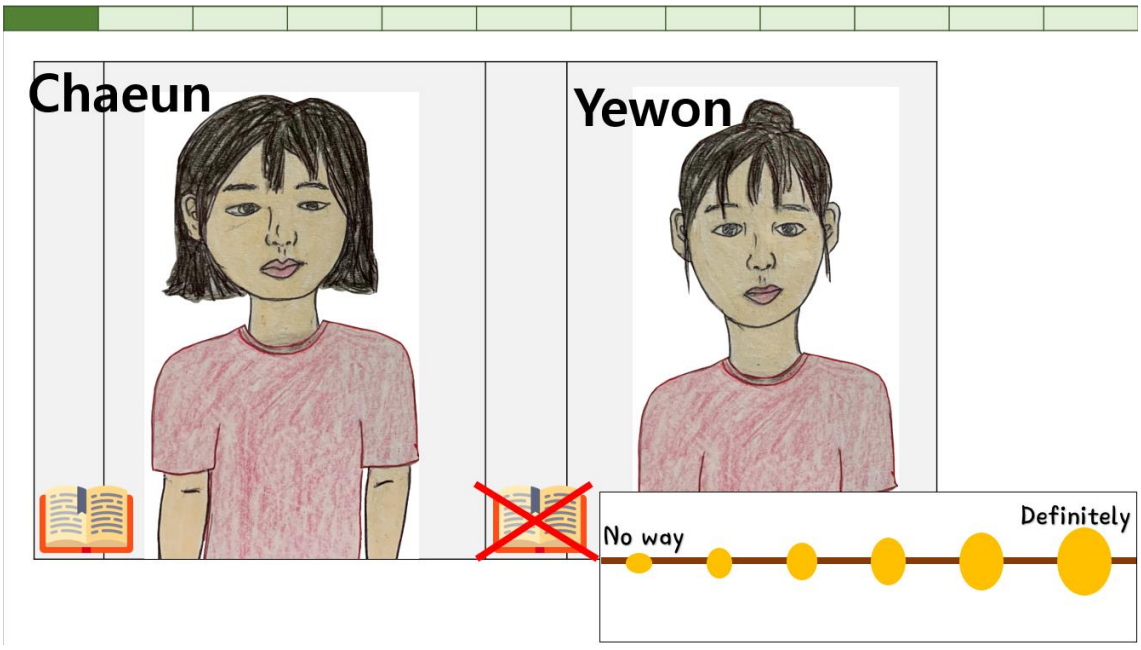
[Explain the visualized scale] The smallest circle here means they are not similar at all. The larger the circles, the more similar they are. So the biggest circle here means they are very similar. While I slowly move the cursor along the scale, shout out "STOP" at the circle you want. Remember, the bigger the circle the more similar they are, the smaller the circle, the less similar.



Q2. Why do you think Chaeun and Yewon are alike/not alike?

Q3. How likely do you think Chaeun and Yewon are friends?

[Explain the visualized scale] Again, the smallest circle here means they will no way be friends. The larger the circle, the more likely they are friends. So the biggest circle here means they are definitely friends. While I slowly move the cursor along the scale, shout out "STOP" at the circle you want. Remember, the bigger the circle the more likely they are friends, the smaller the circle, the less likely they are friends.



Q4. Why do you think Chaeun and Yewon are friends/not friends?

2. SSDH: Here is a picture of Praewa and here is a picture of Sirada. Praewa likes to watch movies. Sirada doesn't like to watch movies.

Q1. How much alike are Praewa and Sirada?

[Explain the visualized scale]

Q2. Why do you think Praewa and Sirada are alike/not alike?

Q3. How likely do you think Praewa and Sirada are friends?

[Explain the visualized scale]

Q4. Why do you think Praewa and Sirada are friends/not friends?

3. KSSH: Here is a picture of Yujin and here is a picture of Benyapa. Yujin and Benyapa both like to sing.

Q1. How much alike are Yujin and Benyapa?

Q2. Why do you think Yujin and Benyapa are alike/not alike?

Q3. How likely do you think Yujin and Benyapa are friends?

Q4. Why do you think Yujin and Benyapa are friends/not friends?

4. SKDH: Here is a picture of Nutcha and here is a picture of Sieun. Nutcha likes to play piano. Sieun doesn't like to play piano.

Q1. How much alike are Sieun and Nutcha?

Q2. Why do you think Sieun and Nutcha are alike/not alike?

Q3. How likely do you think Sieun and Nutcha are friends?

Q4. Why do you think Sieun and Nutcha are friends/not friends?

5. SSSH: Here is a picture of Sudarat and here is a picture of Eve. Sudarat and Eve both like to ride bike.

Q1. How much alike are Sudarat and Eve?

Q2. Why do you think Sudarat and Eve are alike/not alike?

Q3. How likely do you think Sudarat and Eve are friends?

Q4. Why do you think Sudarat and Eve are friends/not friends?

6. KKSH: Here is a picture of Subin and here is a picture of Jiwon. Subin and Jiwon both like to paint.

Q1. How much alike are Subin and Jiwon?

Q2. Why do you think Subin and Jiwon are alike/not alike?

Q3. How likely do you think Subin and Jiwon are friends?

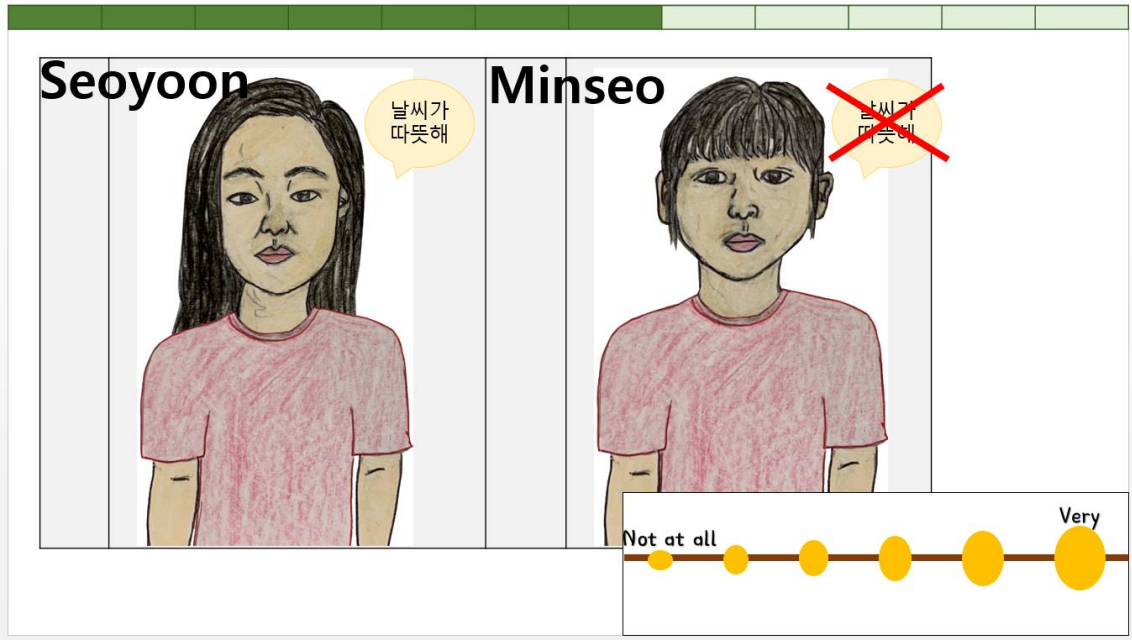
Q4. Why do you think Subin and Jiwon are friends/not friends?

Similarity Task (ST) – Set 2 (Race with Language)

[Proceed with 6 peer dyads, K=Korean, S=Southeast Asian, DL=Different Language, SL=Same Language]

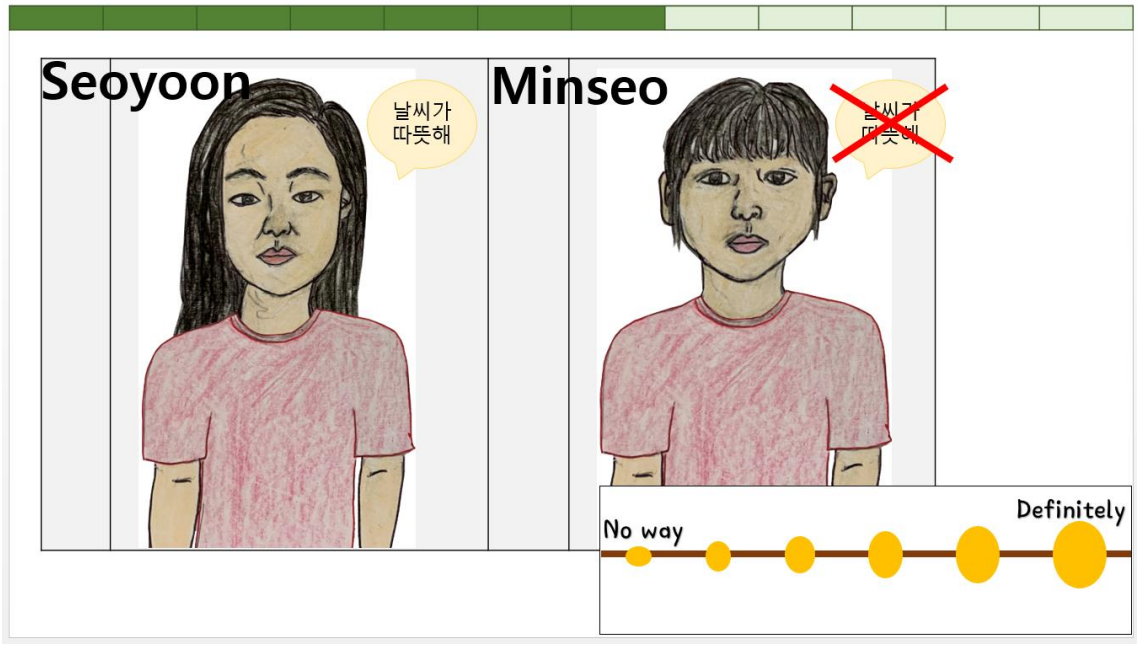
1. KKDL: Here is a picture of Seoyoon and here is a picture of Minseo. Seoyoon speaks Korean. Minseo doesn't speak Korean.

Q1. How much alike are Seoyoon and Minseo?



Q2. Why do you think Seoyoon and Minseo are alike/not alike?

Q3. How likely do you think Seoyoon and Minseo are friends?



Q4. Why do you think Seoyoon and Minseo are friends/not friends?

2. SSDL: Here is a picture of Aom and here is a picture of Kanokwan. Aom speaks Thai. Kanokwan doesn't speak Thai.

Q1. How much alike are Aom and Kanokwan?
Q2. Why do you think Aom and Kanokwan are alike/not alike?
Q3. How likely do you think Aom and Kanokwan are friends?
Q4. Why do you think Aom and Kanokwan are friends/not friends?

3. KSSL: Here is a picture of Jiwoo and here is a picture of Fern. Jiwoo and Fern both speak Korean.

Q1. How much alike are Jiwoo and Fern?
Q2. Why do you think Jiwoo and Fern are alike/not alike?
Q3. How likely do you think Jiwoo and Fern are friends?
Q4. Why do you think Jiwoo and Fern are friends/not friends?

4. SKDL: Here is a picture of Natchaya and here is a picture of Hayoon. Natchaya speaks Thai. Hayoon doesn't speak Thai.

Q1. How much alike are Natchaya and Hayoon?
Q2. Why do you think Natchaya and Hayoon are alike/not alike?
Q3. How likely do you think Natchaya and Hayoon are friends?

Q4. Why do you think Natchaya and Hayoon are friends/not friends?

5. SSSL: Here is a picture of Arisa and here is a picture of Janjira. Arisa and Janjira both speak Thai.

Q1. How much alike are Arisa and Janjira?
Q2. Why do you think Arisa and Janjira are alike/not alike?
Q3. How likely do you think Arisa and Janjira are friends?
Q4. Why do you think Arisa and Janjira are friends/not friends?

6. KKSL: Here is a picture of Eunseo and here is a picture of Jiyoon. Eunseo and Jiyoon both speak Korean.

Q1. How much alike are Eunseo and Jiyoon?
Q2. Why do you think Eunseo and Jiyoon are alike/not alike?
Q3. How likely do you think Eunseo and Jiyoon are friends?
Q4. Why do you think Eunseo and Jiyoon are friends/not friends?

Closing

This is the end of our activity. Thank you for answering all my questions well. You have done very well.

Data Collection Protocol - Korean

Introduction

저는 영국에 있는 대학교에서 공부 중인 _____ 선생님이라고 해요. 만나서 반가워요.

자 이제 바뀐 화면은 잘 보이나요? 화면 속에 하트가 몇 개 그려져 있는지 대답해줄래요? 하트 색은 어떤 색인가요? 아주 잘했어요.

선생님이 이제 지도를 보여줄 거에요. 우리 친구는 혹시 동남아시아라는 곳을 들어본 적이 있나요?

태국, 필리핀, 싱가포르, 베트남과 같은 나라들을 합쳐서 우리는 동남아시아라고 불러요. 우리가 많이 먹는 쌀국수, 팟타이, 반미 샌드위치는 모두 동남아시아 사람들이 즐겨 먹는 음식이랍니다. 몇몇 동남아시아 사람들은 이렇게 생겼어요.

지금부터 여러분이 동남아시아 친구들에 대해 어떻게 생각하는지 물어볼 거에요. 시작하기 전에 혹시 궁금한 점 있나요? 궁금한 점이 있으면 언제든지 선생님한테 물어봐도 돼요. 오늘 선생님과 두 가지 활동을 할 거에요. 혹시 그만하고 싶으면 언제든 멈춰도 돼요.

여기 그림 속 어린이들을 여러분은 만나본 적은 없을 거에요. 그래도 선생님은 여러분이 이 어린이들에 대해 어떻게 생각하는지 궁금해요.

선생님은 여러분의 이름을 적지 않았어요. 이 뜻은 여러분이 뭐라고 답하든 비밀이라는 거에요.

자 준비 됐나요? 그럼 이제 시작할게요.

Multi-Response Racial Attitude Measure (MRA)

여기 상자 세개가 보이나요? 이 상자는 한국인 어린이 것이고, 이건 동남아시아 어린이 것이에요. 이 빈상자는 누구의 것도 아니에요. 이제부터 보여주는 그림이 동남아시아 어린이랑 어울리면 이 상자에 넣을 거고, 한국인 어린이랑 어울리면 이 상자에 넣을 거고, 누구의 것도 아니면 빈 상자에 넣을 거에요.

(연습1): 자 선생님이랑 연습해볼게요. 여기 검정색 머리카락 사진이 두 장 있네요.

이 어린이들 중에 누구 머리카락이 검정색인가요? 동남아 어린이인가요? 한국 어린이인가요? 둘 모두인가요 아니면 아무도 아닌가요? 선생님한테 얘기해주세요.

자 이제 선생님이 어떤 행동이 그려진 사진을 보여줄 거에요. 이러한 행동을 하는 어린이가 한국 어린이인지, 동남아시아 어린이인지, 두 어린이 모두인지, 아무도 아닌지 선생님한테 알려주세요.

여러분의 생각을 물어보는 거니까 틀린 답은 없어요. 모두 다 정답이에요. 솔직하게만 대답해주면 됩니다. 여기 있는 칸이 끝까지 갈색으로 채워질 때까지 첫 번째 활동을 할 거에요. 시작해볼게요.

우선 그림 하나를 보여줄게요. 깨끗한 행동을 하는 그림이네요.

1. 깨끗한(clean):

어떤 어린이들은 깨끗해요. 밥 먹기 전에 손 씻는 걸 까먹지 않아요. 이 중에 누가 깨끗할까요? 한국 어린이일까요, 동남아시아 어린이일까요, 아무도 아닐까요 아니면 둘 다 일까요?

2. 화를 잘 내는(unfriendly):

어떤 어린이들은 화를 잘 내요. 친구들을 밀고 다니고 툭하면 싸워요. 이 중에 누가 화를 잘 낼까요? 동남아시아 어린이일까요, 한국 어린이일까요, 둘 다 일까요 아니면 아무도 아닐까요?

3. 못된(mean):

이 중에 어떤 어린이가 다른 친구들을 콕콕 지르고 다니면서 못되게 행동할까요? 한국 어린이일까요, 동남아시아 어린이일까요, 둘 다 일까요 아니면 아무도 아닐까요?

4. 멋진(wonderful):

어떤 어린이들은 멋져요. 슈퍼맨처럼 뭐든지 잘 해요. 이 중에 누가 아주 멋질까요? 동남아시아 어린이일까요, 한국 어린이일까요, 둘 다 일까요 아니면 아무도 아닐까요?

5. 걷기 좋아하는(likes to walk):

어떤 어린이들은 걷는 걸 좋아해요. 누가 좋아할까요?

6. 지저분한(dirty):

어떤 어린이들은 지저분해요. 이곳 저곳 더러운 얼룩을 묻혀요. 이 중에 누가 지저분할까요?

7. 건강한(healthy):

어떤 어린이들은 건강해요. 아프지 않고 씩씩해요. 누가 건강할까요?

8. 훌륭한(good):

어떤 어린이들은 훌륭해요. 부모님 말씀을 잘 듣고 방도 깨끗하게 정리해요. 누가 훌륭할까요?

9. 공격적인 (cruel):

어떤 어린이들은 공격적이에요. 아기 고양이에게 돌맹이를 던지곤 해요. 누가 공격적일까요?

10. 바보 같은(stupid):

어떤 어린이들은 바보 같은 행동을 해요. 화장실에 바닥에 휴지를 전부 떨어트려서 장난치고 어지럽히고는 해요. 누가 바보 같은 행동을 할까요?

11. 예의 바른(polite):

어떤 어린이들은 예의 발라요. 선물을 받으면 감사하다는 말을 꼭 해요. 누가 예의 바를까요?

12. 노래 부르기 좋아하는(likes to sing):

어떤 어린이들은 노래 부르는 걸 좋아해요. 누가 노래 부르는 걸 좋아할까요?

13. 행복한(happy):

어떤 어린이들은 행복해해요. 잘 웃어요. 누가 행복할까요?

14. 이기적인(selfish):

어떤 어린이들은 이기적이에요. 장난감을 혼자만 가지고 놀고 친구들이랑 나눠 가지는 걸 싫어해요. 누가 이기적일까요?

15. 아픈(sick):

어떤 어린이들은 아파요. 아파서 학교에 잘 오지도 못하고 친구들이랑 잘 놀지도 못해요. 누가 아플까요?

16. 인기 많은(popular):

어떤 어린이들은 함께 노는 게 즐거워서 주변에 친구들이 많아요. 누가 인기가 많을까요?

17. TV를 좋아하는(likes TV): 어떤 어린이들은 TV 보는 걸 좋아해요. 누가 TV 보는 걸 좋아할까요?

18. 말을 안 듣는(naughty):

어떤 어린이들은 말을 잘 안 들어요. 벽에 낙서도 하고 규칙도 안 지켜요. 누가 말을 안 들을까요?

19. 착한(kind):

어떤 어린이들은 착해요. 친구들한테 꽃도 주고 사이 좋게 지내요. 누가 착할까요?

20. 친구에게 불친절한(won't let others play):

어떤 어린이들은 친구들에게 불친절해요. 반 친구들한테 '저리가. 너는 우리랑 놀 수 없어' 라는 말을 자주 해요. 누가 친구들에게 불친절할까요?

21. 노래 듣기 좋아하는(likes music):

어떤 어린이들은 음악 듣는 걸 좋아해요. 누가 음악을 좋아할까요?

22. 나쁜 (bad):

어떤 어린이들은 나쁜 행동을 해요. 몰래 물건을 훔치고 거짓말을 해요. 누가 나쁜 행동을 할까요?

23. 잘 도와주는(helpful):

어떤 어린이들은 잘 도와줘요. 도움이 필요한 친구들을 도와줘요. 누가 잘 도와줄까요?

24. 똑똑한(smart):

어떤 어린이들은 똑똑해요. 학교 숙제도 잘 해오고 선생님 질문에 대답도 잘해요. 누가 똑똑할까요?

Transition

너무 잘했어요. 이제 마지막으로 선생님과 한가지 활동을 더 할 거에요.

이번 활동도 역시 틀린 답은 없어요. 선생님 질문에 솔직하게만 대답해주면 됩니다. 중간에 혹시 질문이 어렵거나 멈추고 싶으면 선생님에게 얘기해주세요. 이번에도 여기 있는 칸이 끝까지 채워질 때까지 할 거에요. 준비 됐나요?

Similarity Task (ST) – Set 1 (Race with Hobby)

1.KKDH: 이 사진 속 아이 이름은 채은이에요. 이 아이 이름은 예원이에요. 채은이는 책 읽는 걸 좋아해요. 예원이는 책 읽는 걸 좋아하지 않아요.

Q1. 채은이와 예원이는 얼마나 비슷한가요?

전혀 안 비슷하면 작은 동그라미이고 동그라미가 커질수록 많이 비슷한 거에요. 선생님이 화살표

를 움직일 건데 얼마나 비슷한지 XX이가 생각하는 동그라미에서 STOP 이라고 해주세요. 이쪽으로 갈수록 많이 비슷한 거고 이쪽으로 갈수록 안 비슷한 거에요.

생각하는 곳에서 STOP 이라고 얘기해주세요. 동그라미가 커질수록 A와 B가 비슷한 거고 동그라미가 작을수록 안 비슷한 거에요. 채은이와 예원이는 얼마나 비슷한가요? 시~작!

Q2. 왜 채은이와 예원이는 [이만큼] 비슷한가요?

Q3. 채은이와 예원이는 절대 친구가 아닐까요 확실히 친구일까요?

이번에도 마찬가지로 절대 친구가 아니면 작은 동그라미이고 동그라미가 커질수록 확실히 친구인 거에요. 선생님이 화살표를 움직일 건데 XX이가 생각하는 동그라미에서 STOP이라고 해주세요. 이쪽으로 갈수록 A와 B가 확실히 친구인 거고 이쪽으로 갈수록 절대 친구가 아닌 거에요.

Q4. 왜요?

2.SSDH: 이 사진 속 아이 이름은 프레와에요. 이 아이 이름은 시라다에요. 프레와는 영화 보는 걸 좋아해요. 시라다는 영화 보는 걸 좋아하지 않아요.

Q1. 프레와와 시라다는 얼마나 비슷한가요?

Q2. 왜 프레와와 시라다는 [이만큼] 비슷한가요?

Q3. 프레와와 시라다는 친구일까요?

Q4. 왜요?

3.KSSH: 이 사진 속 아이 이름은 유진이에요. 이 아이 이름은 벤야파에요. 유진이와 벤야파는 둘 다 노래 부르는 걸 좋아해요.

Q1. 유진이와 벤야파는 얼마나 비슷한가요?

Q2. 왜 유진이와 벤야파는 [이만큼] 비슷한가요?

Q3. 유진이와 벤야파는 친구일까요?

Q4. 왜요?

4.SKDH: 이 사진 속 아이 이름은 눗챠에요. 이 아이 이름은 시은이에요. 눗챠는 피아노 치는 걸 좋아해요. 시은이는 피아노 치는 걸 좋아하지 않아요.

Q1. 눗챠와 시은이는 얼마나 비슷한가요?

Q2. 왜 눗챠와 시은이는 [이만큼] 비슷한가요?

Q3. 눗챠와 시은이는 친구일까요?

Q4. 왜요?

5.SSSH: 이 사진 속 아이 이름은 수다랏이에요. 이 아이 이름은 이브에요. 수다랏과 이브는 둘

다 자전거 타는 걸 좋아해요.

Q1. 수다랏과 이브는 얼마나 비슷한가요?

Q2. 왜 수다랏과 이브는 [이만큼] 비슷한가요?

Q3. 수다랏과 이브는 친구일까요?

Q4. 왜요?

6.KKSH: 이 사진 속 아이 이름은 수빈이에요. 이 아이 이름은 지원이에요. 수빈이와 지원이는 둘 다 그림 그리는 걸 좋아해요.

Q1. 수빈이와 지원이는 얼마나 비슷한가요?

Q2. 왜 수빈이와 지원이는 [이만큼] 비슷한가요?

Q3. 수빈이와 지원이는 친구일까요?

Q4. 왜요?

Similarity Task (ST) – Set 2 (Race with Language)

1.KKDL: 이 사진 속 아이 이름은 서윤이에요. 이 아이 이름은 민서에요. 서윤이는 한국말을 할 줄 알아요. 민서는 한국말을 할 줄 몰라요.

Q1. 서윤이와 민서는 얼마나 비슷한가요?

Q2. 왜 서윤이와 민서는 [이만큼] 비슷한가요?

Q3. 서윤이와 민서는 친구일까요?

Q4. 왜요?

2.SSDL: 이 사진 속 아이 이름은 아옴이에요. 이 아이 이름은 카노크완이에요. 아옴은 태국말을 할 줄 알아요. 카노크완은 태국말을 할 줄 몰라요.

Q1. 아옴과 카노크완은 얼마나 비슷한가요?

Q2. 왜 아옴과 카노크완은 [이만큼] 비슷한가요?

Q3. 아옴과 카노크완은 친구일까요?

Q4. 왜요?

3.KSSL: 이 사진 속 아이 이름은 지우에요. 이 아이 이름은 뻐른이에요. 지우와 뻐른이는 둘 다 한국말을 할 줄 알아요.

Q1. 지우와 뻐른이는 얼마나 비슷한가요?

Q2. 왜 지우와 뻐른이는 [이만큼] 비슷한가요?

Q3. 지우와 뻐른이는 친구일까요?

Q4. 왜요?

4.SKDL: 이 사진 속 아이 이름은 나차야에요. 이 아이 이름은 하윤이에요. 나차야는 태국말을 할 줄 알아요. 하윤이는 태국말을 할 줄 몰라요.

Q1. 니차야와 하윤이는 얼마나 비슷한가요?

Q2. 왜 니차야와 하윤이는 [이만큼] 비슷한가요?

Q3. 니차야와 하윤이는 친구일까요?

Q4. 왜요?

5.SSSL: 이 사진 속 아이 이름은 아리사에요. 이 아이 이름은 잔지라에요. 아리사와 잔지라는 둘 다 태국말을 할 줄 알아요.

Q1. 아리사와 잔지라는 얼마나 비슷한가요?

Q2. 왜 아리사와 잔지라는 [이만큼] 비슷한가요?

Q3. 아리사와 잔지라는 친구일까요?

Q4. 왜요?

6.KKSL: 이 사진 속 아이 이름은 은서에요. 이 아이 이름은 지윤이에요. 은서와 지윤이는 둘 다 한국말을 할 줄 알아요.

Q1. 은서와 지윤이는 얼마나 비슷한가요?

Q2. 왜 은서와 지윤이는 [이만큼] 비슷한가요?

Q3. 은서와 지윤이는 친구일까요?

Q4. 왜요?

Closing

자 우리 활동은 여기서 끝났어요. 오늘 정말 잘해줬어요. 고마워요.

Appendix G: CUREC and DPA Approval

(1) CUREC approval

CUREC approval CIA-21-240

Dear [Author's name]

'Children's decision making on interracial friendship: Focusing on Koreans' racial attitudes and perceptions of similarity'

The above application has been considered on behalf of the Departmental Research Ethics Committee (DREC) in accordance with the procedures laid down by the University for ethical approval of all research involving human participants.

I am pleased to inform you that, based on the information provided to DREC, the proposed research has been judged as meeting appropriate ethical standards, and accordingly, approval has been granted.

Please continue to follow all current guidance issued by CUREC during the pandemic, notably COVID-19: CUREC guidance on research involving human participants, https://researchsupport.admin.ox.ac.uk/governance/ethics/coronavirus

Please follow the guidance on online data collection and research methods issued by the University,
(1) https://researchsupport.admin.ox.ac.uk/covid-19/data#collapse2299911
(2) https://infosec.web.ox.ac.uk/article/guidelines-for-using-zoom

If relevant, please also check the CUREC website for their best practice research guides, https://researchsupport.admin.ox.ac.uk/governance/ethics/resources/bpg

Stay safe,

Yours sincerely,

Pinar

Pinar Kolancali

Researcher in Child Development and Learning

Departmental Research Ethics Committee Member

15 Norham Gardens, Oxford OX2 6PY

Email: pinar.kolancali@education.ox.ac.uk

(2) DPIA screening and DPA form approval

Dear [Author's name],

Thank you for sending me your DPIA screening and DPA forms.

I have reviewed and approved both, please see attached for your records.

I assume that your CUREC approval has already been obtained or is in progress given the cross references you have made in the documents.

I wish you all the best with your research.

Lisa.

Dr Lisa Holmes
Associate Professor
Rees Centre, Dept of Education
University of Oxford
15 Norham Gardens
Oxford, OX2 6PY
Tel: 01865 274056
Twitter: @LisaHolmes_Rees
http://reescentre.education.ox.ac.uk

Privacy by Design

Reference number:

Project Name/ Processing Activity/Business Practice:

Privacy by Design Assessment

Screening assessment outcomes and reasons:
Set out the outcomes and reasons identified in your screening assessment here to explain why you have concluded a DPA is necessary
Screening assessment concluded that a DPA is necessary. This is because the processing of the study is assessed to be unlikely to result in a high risk to study participants.

Stage 1: Necessity and Proportionality Assessment of Proposed Processing of Personal Data

*What is your **lawful basis** for processing?* *What additional **condition** are you relying on for processing special category data?* ***Transparency:*** *When you collect the data, will you be giving individuals the following information:* a. *The purposes for which their personal data will be processed?* b. *The people or organisations their personal data will be shared with?* c. *The lawful basis for processing their personal data?* d. *Any international transfers of their personal data* e. *When their personal data will be erased?* f. *Their rights under GDPR?* ***Accuracy:*** *Are individuals able to update their personal details in the event of any changes?* ***Data minimisation:*** a. *Is the personal data to be collected the minimum necessary to achieve your purpose(s)?* b. *Will access to the personal data be restricted to those with a strict need to know?* c. *How will access be controlled?* d. *Is there any scope to anonymise or pseudonymise the data*	The student researcher will strictly adhere to the GDPR guidance for the processing of personal data. The study does not collect special category data. ***Transparency*** All the information outlined will be provided to the participants. In the head teacher and parental information letter, it will be stated that the research strictly adheres to the research ethics principles of the University and hence follow GDPR. ***Accuracy*** As the participants' personal details will be collected online, via Qualtrics survey, the participants can update their personal details whenever they wish to during the data collection period. The time period allowed for revision will be made known to the participants. ***Data minimisation*** Minimal amount of basic descriptive data will be collected – DOB, gender, class number, and travel experience. Data will only be seen by myself and my supervisor. All child data will be pseudonymised using number codes. Once the survey data collected through Qualtrics has been downloaded to password protected folders on the researcher's password protected computer, the data will be deleted from the Qualtrics server. ***Retention and Security*** All child data will be pseudonymised using number codes. Hence, child's personal data will not be identifiable in the research data. Once the

Retention: a. *Is there a documented retention schedule?* b. *Is there a clear reason for the length of time personal data will be kept?* c. *Is the reason documented?* d. *Is there a procedure for implementation of the retention schedule?* e. *Is there a procedure in place for monitoring the implementation of the retention schedule?* ***Security:*** a. *Will personal data be collected, transmitted and stored securely?* b. *Is the level of security to be provided appropriate to the risks presented by the processing?* c. *Will arrangements be put in place for the secure disposal and/or destruction of data when it is no longer required?* ***Data processors:*** a. *Will a third party be used to process the personal data on behalf of the University?* b. *What processing will the processor carry out?* c. *Is there an agreement in place with the third party?* d. *Does the agreement include all the provisions required under the GDPR?* ***Data sharing:*** a. *Are decisions about how the personal data will be used being taken jointly with another organisation?* b. *Is the personal data to be shared with that other organisation?* c. *Is there an agreement with the other organisation covering respective roles & responsibilities including request and complaints handling?* ***International transfers:*** a. *Will personal data be transferred outside the EEA?* b. *If so, will the transfer be to a country approved by the EU?*	dissertation has been completed, the files will be deleted from the researcher's password protected computer and remain available in the University's secure server only, with access only by the supervisor. The files will be deleted from the server after three years, or as per norms if the research is published in a peer reviewed journal. An identifier sheet containing participant's name, age, and unique ID will be password protected and will only be saved on the student researcher's password protected computer. No other digital copy of this sheet will be made and it will be destroyed after the dissertation has been submitted. Once the dissertation is submitted, the student researcher will confirm the disposal of all research data on her computer to her supervisor. ***Data processors*** The study does not allow access to personal data to any third parties. The student researcher and her supervisor will be the only ones with access to the data. ***Data sharing*** The personal data will not be shared with another organisation. ***International transfers*** The personal data will be collected in South Korea and will be stored in the University server. Files will be transferred using the University's email system and file transfer system.

c. *If not, will appropriate safeguards be in place e.g. model clauses/Privacy Shield*	

Stage 2: Risks Identification and Assessment Matrices

Remote likelihood of harm + minimal impact = LOW risk

Possible likelihood of harm + minimal impact = LOW risk

Probable likelihood of harm + minimal impact = LOW risk

Remote likelihood of harm + significant impact = LOW risk

Possible likelihood of harm + significant impact = MEDIUM risk

Probable likelihood of harm + significant impact = HIGH risk

Remote likelihood of harm + severe impact = LOW risk

Possible likelihood of harm + severe impact = HIGH risk

Probable likelihood of harm + severe impact = HIGH risk

		SEVERITY OF IMPACT		
		Minimal	Significant	Severe
LIKELIHOOD OF HARM	Remote	**LOW**	**LOW**	**LOW**
	Possible	**LOW**	**MEDIUM**	**HIGH**
	Probable	**LOW**	**HIGH**	**HIGH**

Risks of Processing Matrix

Impact on Individuals **Will the processing lead to individuals suffering…**	**Likelihood of Harm** **Remote** **Possible** **Probable**	**Severity of Impact** **Minimal** **Significant,** **Severe**	**Overall risk** **Low,** **Medium** **High**	**Reasons**
Inability to exercise their privacy rights ie: • *To be given information about processing* • *To access their personal data* • *To request correction* • *To request erasure* • *To object to personal data being processed for marketing purposes* • *To object to processing where the lawful basis is legitimate interests* • *To restrict processing* • *To request transfer to another party* • *Inability to request decisions are made by a person and not by automated processing*	Remote	Minimal	Low	Participants will be informed about their privacy rights through information letters and verbally before the study takes place.
Inability to access services	Remote	Minimal	Low	The study does not risk participants' access to services or opportunities.
Inability to access opportunities	Remote	Minimal	Low	Attrition is allowed and participants can ask for removal of their data if they do not wish to participate. No harm regarding identity, fraud, financial loss, reputation will be caused and there will be no physical or emotional harm.
Loss of control over personal data	Remote	Minimal	Low	
Discrimination	Remote	Minimal	Low	
Identity theft	Remote	Minimal	Low	
Fraud	Remote	Minimal	Low	
Financial loss	Remote	Minimal	Low	
Reputational damage	Remote	Minimal	Low	
Physical harm	Remote	Minimal	Low	As the identifier sheet will be destroyed once the thesis is
Emotional harm				

Loss of confidentiality *Reidentification of pseudonymised data* *Any other significant economic disadvantage* *Any other significant social disadvantage* *Inability to access personal data because IT systems used for processing are unavailable* *Inability to access personal data in a timely manner due to inability of the University or a third party to restore access to systems in a timely manner*	Remote Remote Remote Remote	Minimal Minimal Minimal Minimal	Low Low Low Low	submitted, there is no risk of reidentification of pseudonymised data. The study does not involve any economic or social value as it is not about personal experience. Participants have access to their personal data as the personal data will be collected online (Qualtrics) and they will have access to the link. Moreover, the participants can ask to withdraw from the study at any time they wish.

Security Risk Matrix

Source of Risk to Individuals A breach of security leading to individuals suffering…..	**Likelihood of Harm** **Remote** **Possible** **Probable**	**Severity of Impact** **Minimal** **Significant,** **Severe**	**Overall risk** **Low,** **Medium** **High**	**Reasons and Measures to be Taken**
loss of personal data examples: • Insecure electronic devices • Unencrypted memory sticks • Paper copies removed from secure work environment • IT system	Remote	Minimal	Low	All personal data will only be stored in password protected files on the student researcher's computer that is also password protected.
destruction of personal data	Remote	Minimal	Low	Personal data will not be altered or destroyed once collected.
alteration of personal data	Remote	Minimal	Low	
Unauthorised disclosure of personal data examples: • Insecure paper waste disposal • Insecure hardware disposal • Use of insecure email accounts Phishing by email, telephone or face to face	Remote	Minimal	Low	All personal data will be collected through Qualtrics. At the end of the day, the data will be deleted from the Qualtrics sever. Downloaded data will be stored in password protected files on the student researcher's computer that is also password protected.

Unauthorised access to personal data examples: • Inadequate doors and locks	Remote	Minimal	Low

• Inadequate supervision of visitors • Inadequate IT system security			
Inability to access personal data because IT systems used for processing are unavailable	Remote	Minimal	Low

Data Protection Principles Risks Matrix

Source of Risk to Individuals Will individuals suffer harm because….	**Likelihood of Harm** **Remote** **Possible** **Probable**	**Severity of Impact** **Minimal** **Significant,** **Severe**	**Overall risk** **Low,** **Medium** **High**	**Reasons and Measures to be Taken**
Personal data will not be obtained direct from individuals & informing them of processing is impossible to achieve or will involve disproportionate effort	Remote	Minimal	Low	Personal data will be collected from the child participants and their parents. Written and verbal information on the processing will be informed to both.
The purpose of processing is unclear	Remote	Minimal	Low	The purpose of processing will be clearly informed and will not be changed after the CUREC approval.
The purpose changes over time	Remote	Minimal	Low	
A new purpose arises	Remote	Minimal	Low	
Inadequate personal data is collected for the purpose	Remote	Minimal	Low	Only minimal descriptive personal data will be
Irrelevant personal	Remote	Minimal	Low	

data is collected				collected.
More personal data is collected than necessary	Remote	Minimal	Low	
The personal data held is not accurate	Remote	Minimal	Low	The personal data will be only collected through children themselves or their parents.
The personal data is collected from unclear sources	Remote	Minimal	Low	
The integrity of the personal data is unclear	Remote	Minimal	Low	
The personal data is kept for longer than needed	Remote	Minimal	Low	The personal data will be deleted once the study is over as informed.

Carried out by:	[redacted]
Role:	Student researcher
Date:	12. May. 2021.
Approved by:	[redacted]
Role:	Supervisor, Principal investigator
Date:	12. May. 2021
First review Date:	12. May. 2021
Measures to be incorporated into project plan	By: [redacted] Role: Student researcher By date: 12. May. 2021

Appendix H: Assumption Tests

(1) Kolmogorov-Smirnov tests of normality

		Kolmogorov-Smirnov[a]		
		statistic	df	p
MRA				
K Positive		0.331	82	0.000
S Positive		0.227	82	0.000
K Negative		0.225	82	0.000
S Negative		0.232	82	0.000
Prejudice		0.208	82	0.000
Against-prejudice		0.148	82	0.000
ST				
Similarity (race with hobby)	KKDH	0.158	82	0.000
	SSDH	0.154	82	0.000
	SKDH	0.196	82	0.000
	KKSH	0.237	82	0.000
	SSSH	0.262	82	0.000
	KSSH	0.210	82	0.000
Similarity (race with language)	KKDL	0.150	82	0.000
	SSDL	0.138	82	0.001
	SKDL	0.158	82	0.000
	KKSL	0.279	82	0.000
	SSSL	0.282	82	0.000
	KSSL	0.198	82	0.000
Friendship (race with hobby)	KKDH	0.236	82	0.000
	SSDH	0.211	82	0.000
	SKDH	0.162	82	0.000
	KKSH	0.256	82	0.000
	SSSH	0.264	82	0.000
	KSSH	0.227	82	0.000
Friendship (race with language)	KKDL	0.196	82	0.000
	SSDL	0.150	82	0.000
	SKDL	0.172	82	0.000
	KKSL	0.319	82	0.000
	SSSL	0.322	82	0.000
	KSSL	0.305	82	0.000

Note. a. Lilliefors Significance Correction. K = Korean, S = Southeast Asian, DH = Different Hobby, SH = Same Hobby, DL = Different Language, SL = Same Language.

(2) Skewness and kurtosis

		N	Skewness		Kurtosis	
			Statistic	SE	Statistic	SE
MRA						
K Positive		82	-2.674	0.266	9.376	0.526
K Positive_Square		82	-1.519	0.266	1.928	0.526
S Positive		82	-1.170	0.266	0.360	0.526
K Negative		82	1.606	0.266	2.050	0.526
S Negative		82	1.173	0.266	0.396	0.526
Prejudice		82	0.870	0.266	1.042	0.526
Against-prejudice		82	-0.409	0.266	0.308	0.526
ST						
Similarity (race with hobby)	KKDH	82	0.057	0.266	-0.407	0.526
	SSDH	82	-0.102	0.266	-0.957	0.526
	SKDH	82	-0.109	0.266	-0.793	0.526
	KKSH	82	-0.838	0.266	0.331	0.526
	SSSH	82	-1.285	0.266	1.605	0.526
	KSSH	82	-0.601	0.266	-0.775	0.526
Similarity (race with language)	KKDL	82	0.241	0.266	-0.989	0.526
	SSDL	82	0.165	0.266	-0.720	0.526
	SKDL	82	0.269	0.266	-0.980	0.526
	KKSL	82	-1.366	0.266	1.348	0.526
	SSSL	82	-1.009	0.266	0.520	0.526
	KSSL	82	-0.620	0.266	-0.185	0.526
Friendship (race with hobby)	KKDH	82	-1.187	0.266	1.706	0.526
	SSDH	82	-0.954	0.266	0.240	0.526
	SKDH	82	-0.376	0.266	-0.833	0.526
	KKSH	82	-1.225	0.266	1.413	0.526
	SSSH	82	-1.979	0.266	4.499	0.526
	KSSH	82	-1.225	0.266	0.753	0.526
Friendship (race with language)	KKDL	82	-0.230	0.266	-1.219	0.526
	SSDL	82	-0.330	0.266	-0.772	0.526
	SKDL	82	-0.199	0.266	-1.062	0.526
	KKSL	82	-1.322	0.266	1.121	0.526
	SSSL	82	-1.934	0.266	4.316	0.526
	KSSL	82	-1.582	0.266	2.673	0.526

Note. K = Korean, S = Southeast Asian, DH = Different Hobby, SH = Same Hobby, DL = Different Language, SL = Same Language

(3) Mauchly's test of sphericity

- Similarity perceptions scores

Mauchly's Test of Sphericity[a]

Measure:

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b]		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Hobby	1.000	0.000	0		1.000	1.000	1.000
Race	.945	4.451	2	.108	.948	.983	.500
Hobby * Race	.944	4.590	2	.101	.947	.981	.500

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept + Grade
Within Subjects Design: Hobby + Race + Hobby * Race

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Mauchly's Test of Sphericity[a]

Measure:

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b]		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Language	1.000	0.000	0		1.000	1.000	1.000
Race	.982	1.400	2	.497	.983	1.000	.500
Language * Race	.971	2.317	2	.314	.972	1.000	.500

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept + Grade
Within Subjects Design: Language + Race + Language * Race

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

- Friendship potential scores

Mauchly's Test of Sphericity[a]

Measure:

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b]		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Hobby	1.000	0.000	0		1.000	1.000	1.000
Race	.987	1.048	2	.592	.987	1.000	.500
Hobby * Race	.997	.270	2	.874	.997	1.000	.500

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept + Grade
Within Subjects Design: Hobby + Race + Hobby * Race

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Mauchly's Test of Sphericity[a]

Measure:

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b]		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Language	1.000	0.000	0		1.000	1.000	1.000
Race	.965	2.811	2	.245	.966	1.000	.500
Language * Race	.979	1.655	2	.437	.980	1.000	.500

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.
a. Design: Intercept + Grade
Within Subjects Design: Language + Race + Language * Race
b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Appendix I: Thematic Analysis Codebook

(1) Similarity Judgment Reasons

Theme and associated codes	How many participants discussed it	Extracts of responses
Racial features	69	
Skin colour	59	″They both have black skin colour″ ″They have different skin colour so they are not similar″
Race and nationality	31	″I think they are from the same countries. So have similar personalities.″ ″They have different skin colour and look very different. That is because they are from different countries.″
Physical features (non-racial)	67	
Appearance	67	″Their hairstyle is similar and they both like to sing″ ″They are completely different. Sarawut has round face but Sirichai has oval face.″
Clothes	32	″They are both wearing pink t-shirts so I think they like the same things.″ ″The colour of their skin and t-shirts are the same. So they are similar.″
Language	65	“They both speak Korean so I think they are from Korea.” “They have different skin colours and only one person can speak Thai.”
Hobby	62	“Because they both like to ride bikes, they will become similar as they get along.” “Sunwoo likes to read but Jihwan does not. So they have different personalities.”
Individual characteristics	23	

Name	11	″They both have same vowels in their names.″ ″The length of their names are different.″
Personality	10	″They have similar personalities and live in the same country.″ ″They seem to have different personalities.″
Gender	3	″Because they are both girls. If one person was a boy than they will be different.″ ″They have dark skin colour and speak Thai and are girls.″
Group membership	12	
Friendship	10	″They both like to sing so they will become friends and become similar.″ ″They look like friends.″
All humans are the same	2	″They are from the same country and their skin colours are the same. Also, all humans are the same.″ ″Because they are both humans.″
Neighborhood	2	″They live in the same neighbourhood.″ ″They have different skin colours, hairstyles, hobbies, and live in different areas.″
Student	2	″They are similar because they are both students.″ ″They go to the same school.″

(2) Friendship Potential Judgment Reasons

Theme and associated codes	How many participants discussed it	Extracts of responses
Similar traits	82	
Language	68	″They both can speak Korean so they can get along well.″
Hobby	61	″They both like to ride bikes so they can become friends easily.″
Racial features	53	
Nationality	36	″They are from the same countries so they get along well.″
Skin colour	32	″They have same skin colour and like to ride bikes. So they can be friends.″
Appearance (non-racial)	46	″They look alike and they wear same clothes.″
Similar in general	28	″They are very similar. You can be friends if you′re similar with someone.″
Individual characteristics	25	″They both seem like happy people. Happy people can become friends with each other.″
School	12	″I think they are both wearing the same school uniforms. So they are friends.″
Dissimilar traits	80	
Language	64	″They cannot be friends because they cannot understand each other.″
Disregard difference	38	″Natchaya does not speak Korean but maybe they both like to run. So they can be friends.″
Racial features	43	
Nationality	27	″They are from different countries so I do not think they know each other.″
Skin colour	21	″One has bright skin colour and the other has dark skin colour.″
Disregard difference	14	″People from different countries still can be friends.″

Hobby	30	″They do not share hobby. Sieun does not like playing the piano.″
Disregard difference	12	″If Sirada does not like to watch movie, they can find other hobbies.″
Appearance(non-racial)	24	″They have different hair style.″
Disregard difference	6	″Different looks do not matter when choosing a friend.″
Different in general	16	″Because they are not similar.″
Disregard difference	9	″You can become friends with people who are different to you.″
Individual characteristics	16	″They have different personalities so they feel uncomfortable around each other.″
Disregard difference	5	″If you open up you can be friends with people with different personalities.″
School	3	″They are from different countries so they go to different schools.″

Appendix J: Order Effect Findings

This appendix presents the order effect findings in all variables (Table J1). Four scores were significantly different by order: (1) Against-prejudice, (2) Friendship KKDH(Korean-Korean, Different Hobby), (3) Friendship KKSH(Korean-Korean, Same Hobby), (4) Friendship KKSL(Korean-Korean, Same Language). Accordingly, the scores for against-prejudice and friendship were also analysed separately by each order and are discussed below.

Table J1

T-Test Results Comparing Scores of Multi-Response Racial Attitude Measure (MRA) and Similarity Task (ST) by Order A and B

Variables		Order A (n=42)		Order B (n=40)		t	p	Range
		Mean	SD	Mean	SD			
MRA								
K Positive		9.24	1.28	9.55	0.68	-1.17	.247	0-10
S Positive		7.83	2.59	6.75	3.22	1.68	.096	
K Negative		1.95	2.52	1.28	1.57	1.47	.146	
S Negative		1.95	2.42	2.68	2.67	-1.28	.203	
Prejudice		11.19	2.73	12.23	2.80	-1.70	.094	0-20
Against-prejudice		9.79	3.78	8.03	3.68	2.14*	.036	
ST								
Similarity (race with hobby)	KKDH	3.00	1.23	3.45	1.43	-1.53	.130	1-6
	SSDH	3.74	1.52	3.73	1.66	0.04	.970	
	SKDH	3.12	1.23	2.95	1.28	0.61	.544	
	KKSH	4.93	1.16	4.45	1.15	1.88	.064	
	SSSH	5.07	0.97	4.93	1.40	0.55	.583	
	KSSH	4.21	1.65	4.00	1.59	0.60	.550	
Similarity (race with language)	KKDL	2.93	1.55	2.83	1.38	0.32	.750	
	SSDL	3.10	1.41	3.23	1.44	-0.41	.681	
	SKDL	3.10	1.62	2.80	1.34	0.90	.373	
	KKSL	5.05	1.38	4.93	1.27	0.42	.677	
	SSSL	5.31	0.92	5.05	0.96	1.25	.216	
	KSSL	4.62	1.31	4.18	1.34	1.52	.132	
Friendship (race with hobby)	KKDH	5.21	0.92	4.75	1.15	2.02*	.047	
	SSDH	4.60	1.29	4.28	1.62	0.99	.323	
	SKDH	4.26	1.58	3.70	1.57	1.61	.110	
	KKSH	5.31	0.92	4.70	1.29	2.46*	.017	
	SSSH	5.36	0.91	4.98	1.35	1.51	.134	
	KSSH	4.98	1.37	4.50	1.59	1.46	.149	
Friendship (race with language)	KKDL	3.86	1.69	3.50	1.71	0.95	.344	
	SSDL	3.93	1.66	3.85	1.48	0.23	.822	
	SKDL	3.98	1.70	3.48	1.54	1.40	.166	
	KKSL	5.36	1.19	4.80	1.24	2.08*	.041	
	SSSL	5.33	1.18	5.28	0.88	0.25	.801	
	KSSL	5.33	1.05	5.10	1.08	0.99	.325	

* $p<.05$

Note. K = Korean, S = Southeast Asian, DH = Different Hobby, SH = Same Hobby, DL = Different Language, SL = Same Language

(1) Against-prejudice score

Preliminary analysis on the against-prejudice scores in the MRA task found an order effect and therefore the against-prejudice scores within each order was analyzed separately. The against-prejudice scores within each order were submitted to independent t-test to compare the score differences by grades (see Table J2). Against-prejudice scores between grades were significant for both order A *t(38)* = -2.08*, *p* = .044, and order B, *t(40)* = -3.33**, *p* = .002. Overall, third graders had higher against-prejudice scores than first graders in both order A and order B. However, the grade difference in order B was stronger than order A, as first graders' against-prejudice score in order B (*M* = 6.30) was lower than the first graders in order A (*M* = 8.62).

Table J2

T-Test Results Comparing Scores of Against-prejudice by Orders

Variable	Grade	n	M	SD	t	p
Against-prejudice (order A)	1	21	8.62	4.10	-2.08*	.044
	3	21	10.95	3.11		
Against-prejudice (order B)	1	20	6.30	3.92	-3.33**	.002
	3	20	9.75	2.47		

* p<.05, ** p<.01

(2) Friendship score: race with hobby condition

A 2 (Grade of participant) x 3 (Race of peer dyad: cross-race, Korean, Southeast Asian) x 2 (Hobby: same, different) ANOVA with repeated measures on the last two factors was conducted on the friendship score each for order A and B (see Table J3). For order A, significant main effects for hobby, *F*(1, 40) = 11.76, *p* = .001, and race, *F*(2, 80) = 6.68, *p* = .002, were found.

For order B, significant main effects for hobby, *F*(1, 38) = 5.57, *p* = .024, and race, *F*(2, 76) = 4.94, *p* = .010, were found. Additionally, a significant hobby x race interaction was found within order

B, $F(2, 76) = 3.24$, $p = .045$, whereas order A did not reveal any interaction effect.

Table J3

ANOVA Results on the Effects of Hobby, Race, and Grade on Friendship Potential Score by Order

Order	Source	SS	df	MS	F	p
A (n=42)	Hobby	17.29	1	17.29	11.76**	.001
	Race	17.43	2	8.71	6.68**	.002
	Grade	6.35	1	6.35	3.21	.081
	Hobby×Grade	1.92	1	1.92	1.31	.260
	Race×Grade	4.22	2	2.11	1.62	.205
	Hobby×Race	5.81	2	2.90	2.53	.086
	Hobby×Race×Grade	4.22	2	2.11	1.84	.166
	Error(Hobby)	58.79	40	1.47		
	Error(Race)	104.35	80	1.30		
	Error(Grade)	79.08	40	1.98		
	Error(Hobby×Race)	91.97	80	1.15		
B (n=40)	Hobby	14.02	1	14.02	5.57*	.024
	Race	18.03	2	9.02	4.94*	.010
	Grade	7.35	1	7.35	2.12	.154
	Hobby×Grade	1.67	1	1.67	0.66	.421
	Race×Grade	4.90	2	2.45	1.34	.267
	Hobby×Race	8.63	2	4.32	3.24*	.045
	Hobby×Race×Grade	1.63	2	0.82	0.61	.545
	Error(Hobby)	95.65	38	2.52		
	Error(Race)	138.73	76	1.83		
	Error(Grade)	131.92	38	3.47		
	Error(Hobby×Race)	101.40	76	1.33		

* p<.05, ** p<.01

In both order A and order B, main effects were found both in hobby and race. These findings suggest that children judge friendship possible when the dyads share same hobby than different hobby. Moreover, the friendship potential for the cross-race dyads were low compared to the same race dyads

(see Table J4).

Table J4

Means and SD for Friendship Scores of Different Dyads in Race with Hobby Condition by Order

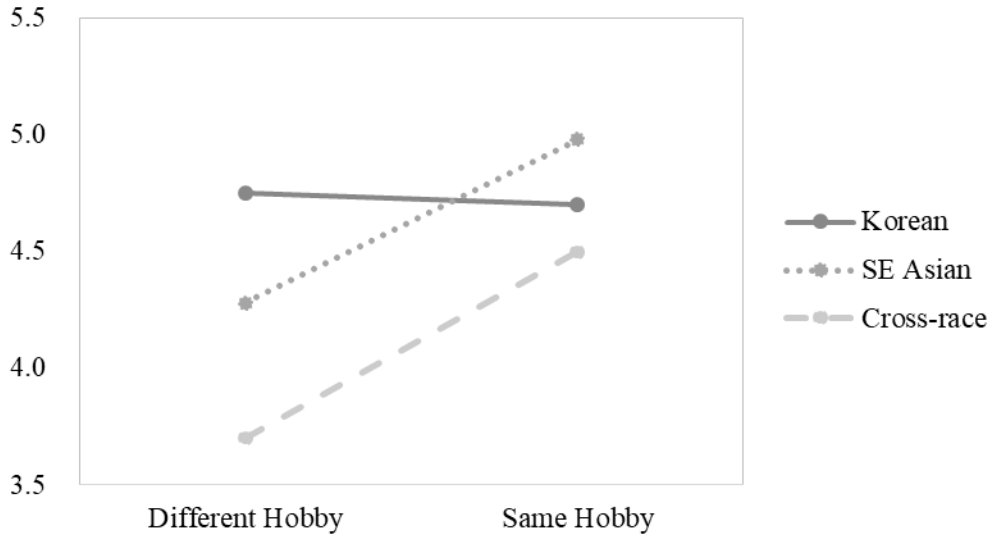
Order	Variable		Grade 1		Grade 3		Total	
			M	SD	M	SD	M	SD
A	Friendship	KKDH	5.24	0.89	5.19	0.98	5.21	0.92
		SSDH	4.43	1.57	4.76	0.94	4.60	1.29
		SKDH	4.19	1.78	4.33	1.39	4.26	1.58
		KKSH	5.24	1.04	5.38	0.80	5.31	0.92
		SSSH	5.29	1.10	5.43	0.68	5.36	0.91
		KSSH	4.38	1.66	5.57	0.60	4.98	1.37
B	Friendship	KKDH	4.80	1.32	4.70	0.98	4.75	1.15
		SSDH	4.00	1.89	4.55	1.28	4.28	1.62
		SKDH	3.65	1.73	3.75	1.45	3.70	1.57
		KKSH	4.70	1.45	4.70	1.13	4.70	1.29
		SSSH	4.65	1.73	5.30	0.73	4.98	1.35
		KSSH	4.05	1.73	4.95	1.32	4.50	1.59

Note. K = Korean, S = Southeast Asian, DH = Different Hobby, SH = Same Hobby.

However, a significant Hobby x Race interaction was only found in order B (see Figure J1). The interaction revealed that when the dyads had different hobby, the Korean dyad had the most potential to be friends, whereas when the dyads had same hobby, Southeast Asian dyad had the highest potential. Moreover, the score gaps in between each racial make-up differed in the same hobby and different hobby conditions. Particularly, the friendship ratings of the Korean dyads barely had any difference independent of the hobby condition

Figure J1

Interaction Effect between Hobby and Race on Friendship Potential Scores



(3) Friendship score: race with hobby condition

A 2 (Grade of participant) x 3 (Race of peer dyad: cross-race, Korean, Southeast Asian) x 2 (Language: same, different) ANOVA with repeated measures on the last two factors was conducted on the friendship score each for order A and B (see Table J5). For order A, a significant main effect for language was found, $F(1, 40) = 35.31$, $p < .001$. Regarding order B, significant main effects for language, $F(1, 38) = 49.29$, $p < .001$, and race, $F(2, 76) = 3.25$, $p = .044$, were found. There was no significant interaction effect between the variables.

Table J5

ANOVA Results on the Effects of Language, Race, and Grade on Friendship Potential Score by Order

Order	Source	SS	df	MS	F	p
A	Language	127.15	1	127.15	35.31***	.000
	Race	0.10	2	0.05	0.04	.962
	Grade	0.48	1	0.48	0.10	.753
	Language×Grade	4.32	1	4.32	1.20	.280
	Race×Grade	0.22	2	0.11	0.09	.913
	Language×Race	0.22	2	0.11	0.13	.882
	Language×Race×Grade	0.00	2	0.00	0.00	1.000
	Error(Language)	144.03	40	3.60		
	Error(Race)	98.02	80	1.23		
	Error(Grade)	191.37	40	4.78		
	Error(Language×Race)	70.78	80	0.88		
B	Language	126.15	1	126.15	49.29***	.000
	Race	7.06	2	3.53	3.25*	.044
	Grade	0.15	1	0.15	0.04	.848
	Language×Grade	4.27	1	4.27	1.67	.204
	Race×Grade	0.18	2	0.09	0.08	.923
	Language×Race	1.07	2	0.54	0.48	.623
	Language×Race×Grade	3.36	2	1.68	1.49	.233
	Error(Language)	97.25	38	2.56		
	Error(Race)	82.43	76	1.08		
	Error(Grade)	153.52	38	4.04		
	Error(Language×Race)	85.90	76	1.13		

* p<.05, *** p<.001

A significant main effect for language was found in both order A and B, indicating that children's friendship potential score differed according to whether the peers spoke the same or different language (see Table J6). Dyads that spoke same language had higher potential to be friends than the dyads that spoke different language. A significant main effect for race was also found in order B, as the Southeast Asian dyads had higher friendship score than the Korean dyads.

Table J6

Means and SD for Friendship Scores of Different Dyads in Race with Language Condition by Order

Order	Variable		Grade 1		Grade 3		Total	
			M	SD	M	SD	M	SD
A	Friendship	KKDL	3.71	1.79	4.00	1.61	3.86	1.69
		SSDL	3.71	1.87	4.14	1.42	3.93	1.66
		SKDL	3.81	1.83	4.14	1.59	3.98	1.70
		KKSL	5.48	1.21	5.24	1.18	5.36	1.19
		SSSL	5.38	1.20	5.29	1.19	5.33	1.18
		KSSL	5.43	0.98	5.24	1.14	5.33	1.05
B	Friendship	KKDL	3.15	1.81	3.85	1.57	3.50	1.71
		SSDL	3.75	1.68	3.95	1.28	3.85	1.48
		SKDL	3.45	1.43	3.50	1.67	3.48	1.54
		KKSL	5.05	1.15	4.55	1.32	4.80	1.24
		SSSL	5.30	0.80	5.25	0.97	5.28	0.88
		KSSL	5.15	1.14	5.05	1.05	5.10	1.08

Note. K = Korean, S = Southeast Asian, DL = Different Language, SL = Same Language.