

Research Article

How Do School Children and Adolescents Perceive the Nature of Talent Development? A Case Study from Finland

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This article examines how school children and adolescents ($N = 607$) perceive the nature of talent development. More particularly it is investigated whether students perceive intelligence and giftedness as developing or as inherent and how students' perspectives on talent development are related to their learning outcomes. Participants were students in elementary ($n = 200$), lower secondary ($n = 256$), and upper secondary school ($n = 151$). The results showed that students perceived the nature of intelligence as more malleable than giftedness. Along with this domain-specific variance, there were also age and gender related differences in students' perceptions. By examining the relation between implicit beliefs and students' academic achievements, it was found that growth-oriented views about intelligence, but fixed ideas about giftedness, indicated higher math grades. The results suggest that the relationship between implicit beliefs and academic outcomes might not be as straightforward as previous studies have suggested.

1. Introduction

Education for 21st-century skills has inspired researchers from different fields of science to propose competencies and approaches that promote creativity and talent development [1]. The holistic approach to school pedagogy includes educating for a growth mindset in learning that allows challenges and creative ideas to flourish in the classroom. Educating for a growth mindset can be seen as one of the most important pedagogical approaches for learning. A growth mindset also encourages gifted students to try harder instead of simply trusting their current abilities [2]. In this article, our aim is to explore how school children and adolescents perceive the nature of talent development. Our special interest is in the mindsets of these students with respect to intelligence and giftedness and whether they see them as developing or inherent.

Like people have their own beliefs about intelligence and giftedness (cf. [3, 4]). These implicit theories, existing in the minds of individuals, are private and informal [4, 5]. Implicit theories are important, because they are influential in real-life situations, even more so than explicit theories, that is, research based theories and definitions developed

by scholars [3]. One relevant concept that concentrates on implicit theories is Dweck's [6] theory of implicit beliefs about the nature of intelligence or other basic qualities and is based on the idea that people can have a fixed mindset (entity theory) or a growth mindset (incremental theory). Those who have a growth mindset believe that intelligence, personality, and abilities can be developed. Those with a fixed mindset believe that these basic qualities are static and unalterable.

Yet why do mindsets matter? The importance of studying students' mindsets about intelligence has been explained by the impact mindsets have been shown to have on school achievement, future orientation, and educational choices [6]. Research has shown that students' mindsets about intelligence play a vital role in their learning success and in confronting educational challenges. According to Dweck [6], students who see intelligence as fixed emphasize performance goals more ("looking smart"), whereas students with a growth mindset emphasize learning goals more ("becoming smart"). The former leaves students vulnerable to negative feedback and can lead to an avoidance of challenging learning opportunities, whereas the latter helps students to rebound from their mistakes [6]. A fixed mindset inhibits individuals from reaching their fullest potential by generating a fear of failure,

avoidance of challenges, and vulnerability to stereotypes such as “I am not a math person” or “math is not for girls” (e.g., [7–9]). Similarly, it has been found that students with a growth mindset are higher achieving during challenging school transitions, and their completion rates of demanding school courses are higher [10]. A growth mindset, either innate or taught, seems to lower adolescents’ aggression and stress [11, 12] and enhances their school performance [13–17]. Furthermore, a national study from Chile has shown how poor school achievement is related to students’ fixed mindsets [18]. A growth mindset also seems to temper the effects of poverty on academic achievement [18].

Earlier research on students’ beliefs about the malleability of intelligence has produced some contradictory findings. Incremental beliefs about intelligence among Greek elementary and junior high school students did not correspond to school achievement [19] nor did these support a causal role for implicit beliefs in academic outcomes [20]. Instead, implicit beliefs about intelligence were found to be affected by prior school success and mediated by perceived academic competence [20].

Furthermore, implicit beliefs have been found to be domain-specific in nature [6]. Thus, it is possible to endorse an entity view of one construct and an incremental view of the other. One domain that has not been much studied thus far is that of implicit beliefs about giftedness. Dweck’s incremental theory can be seen to be in line with the developmental theories and models of giftedness, which emphasize the changing nature of giftedness by highlighting different external and internal factors that contribute to gifted behavior [21]. For example, in their comprehensive *Talent Development Mega Model*, Subotnik et al. [22] discussed different delimiters and enhancers, including psychosocial factors, such as productive and unproductive mindsets. An unproductive mindset (i.e., a fixed mindset) is seen as an attitude that can “prevent coping with setbacks or thwart resiliency” ([22] page 34). Still, there has been little research on implicit beliefs about giftedness (cf. [23, 24]) compared to implicit beliefs about intelligence. The intriguing questions are whether the nature of these concepts is seen in a similar way and whether these views have similar effects on achievement.

Dweck ([25] page 312) suggests that it might be that the “word ‘gift’ itself implies that no effort is involved... and it is something that is bestowed upon the lucky few.” This indicates that giftedness might be seen as more fixed in nature than intelligence. In their study, Laine et al. [24] examined Finnish teachers’ implicit beliefs about giftedness. The results indicated that most of the teachers ($n = 463$) had a growth mindset about giftedness (54%), one-third (30%) had a fixed mindset, and the rest (16%) had a mixed mindset. However, the research made no comparison between implicit beliefs about intelligence and those about giftedness. In Finnish the word intelligence is often used traditionally referring to IQ, in other words, to logical-mathematical and linguistic competencies. Whereas the concept giftedness is used in more broad manner, capturing all the other areas of giftedness as well [24, 26]. One study that contrasted implicit beliefs about intelligence and giftedness was made among high achieving American students. The research indicated that academically

gifted students see giftedness more as fixed and intelligence more as malleable [23]. The research also indicated that even though there is a positive correlation between the natures of the concepts of giftedness and intelligence, the implicit beliefs of giftedness and intelligence cannot be regarded as synonymous [23].

Furthermore, most previous mindset studies have been conducted with adolescents or adults, even though a mindset develops early. We also know that students’ mindsets at the beginning of lower secondary school predict their grades two years later [10]. Still, there is an evident lack of studies on elementary school students’ mindsets, even though students at that age are already able to recognize and develop their motivational frameworks [27]. Thus, the present study provides a cross-sectional view of students’ implicit beliefs from basic education through upper secondary school, covering age groups from 9 to 19. The precise research questions are as follows:

- (1) How do school children and adolescents view the nature of intelligence and giftedness?
- (2) How are school children and adolescents’ perspectives on talent development related to their learning outcomes?

2. Context of the Study

This research has been carried out in the context of the Finnish school system. Overall, Finland’s educational system has three levels: basic education (9-year-long comprehensive school, with an optional tenth year), secondary level (upper secondary school and vocational education), and higher education [28]. Basic education is comprised of elementary school (grades 1–6, age groups 7–12) and lower secondary school/middle school (grades 7–9, age groups 12–15). Upper secondary school provides general academic education typically for 16–18-year-olds. In elementary school, class teachers, who hold master’s degrees in education, are responsible for teaching all subjects. In lower and upper secondary school, subject teachers have a master’s degree in their respective subject(s), which are also the topics they instruct.

In Finland, basic education as well as upper secondary education is intended to foster the holistic growth of students, indicating that education involves not only the cognitive domain, but also the affective and social domains [29, 30]. Equality has been the core value of Finnish education since the 1970s. It has been concretized by providing equal opportunity for every student to be educated for free at all levels. In order to maintain societal equality, the emphasis has been on taking care of the weakest students, for example, those with learning difficulties [31]. However, equality in terms of acknowledging and providing equal learning opportunities for gifted students to develop their talents has been a neglected area in the Finnish school system [32, 33].

Another core value of Finnish education since the 1980s has been individualism. Individualism has meant that students’ personal characteristics, needs, and interests should be taken into consideration in teaching [34, 35]. Since the Finnish school system is intended to be inclusive, most

TABLE 1: Participating students at the Viikki Teacher Training School.

	Basic education		Upper secondary school	Total
	Elementary school Grades 4–6 <i>n</i> = 200	Lower secondary school Grades 7–9 <i>n</i> = 256	Grades I–III(IV) <i>n</i> = 151	<i>N</i> = 607
Gender				
Female	98 (50%)	137 (54%)	102 (68.5%)	337 (56%)
Male	99 (50%)	117 (46%)	47 (31.5%)	263 (44%)
Mother tongue				
Finnish	168 (86%)	222 (87%)	143 (95%)	533 (89%)
Other	28 (14%)	32 (13%)	8 (5%)	68 (11%)
Academic achievement (min 5, max 10)	<i>M</i> (SD)	<i>M</i> (SD)	<i>M</i> (SD)	<i>M</i> (SD)
Math	8.88 (.94)	8.70 (1.13)	8.71 (1.20)	8.76 (1.09)
Finnish	9.16 (.84)	8.34 (1.12)	8.95 (.91)	8.77 (1.05)

students are taught in the same age group. The teacher's task is to create a learning environment that acknowledges the individual differences and learning processes for all students in the classroom [36]. Most recently, differentiated teaching has been described as the cornerstone of Finnish education [29]. Significantly, the 2014 curriculum takes into account for the first time gifted and talented students, which the curriculum conceptualizes as "talented pupils" ([29] pages 111, 139, 255, 405), indicating a change in the Finnish societal atmosphere in this regard.

Finland's success in the Program for International Student Assessment (PISA) was notable at the beginning of the 21st century [37, 38]. However, the two most recent PISA results have revealed that Finnish students' achievements have begun to decline [39, 40]. It has been speculated that one reason for this trend is that, in Finnish schools today, there is no will to confront situations or deal with content that requires students to move out of their comfort zones [41]. In other words, Finnish schools seem to foster a fixed mindset. Empirical studies also show that, in Finnish schools, intelligence and competencies are predominantly understood as relatively stable qualities, views that are nevertheless intertwined with malleable ones in the day-to-day realities of school life [42, 43]. For example, some Finnish teachers believe that the academic competence of poorly achieving students is malleable, yet that of high achieving students is stable [43, 44]. Other teachers' beliefs on this issue can be just the reverse [45].

The research for the present study has been conducted at the Viikki Teacher Training School of the University of Helsinki (hereafter called the Viikki School). The Viikki School functions as a teaching laboratory and includes approximately 940 basic education and upper secondary students and 110 members of the teaching staff. The Viikki School means to provide an optimal example and context for 250 student teachers per year to practice teacher planning, implementation, and evaluation under the guidance of in-service teachers. Basic education (grades 1–9) students at the Viikki School are local children from the neighborhood. The district can be characterized as a medium status, socioeconomic neighborhood in terms of income level, the education level of the original population, the unemployment rate, and

the proportion of foreign-language speaking residents, as opposed to other low, fairly low, and high status neighborhoods in the metropolitan area ([46] pages 46, 53, 71). In addition to basic education, the Viikki School includes an upper secondary school for which students are selected based on school achievements. The Viikki upper secondary school students represent the top of Finnish academically oriented students. To be selected into the Viikki upper secondary school, students must have a remarkably high grade point average (GPA). In 2016, the lowest accepted GPA was 9.42, which in turn was the highest in Helsinki (on a scale of 4–10, with 4 referring to failing, 5 to the lowest grade, and 10 to the highest grade). In scores on matriculation examinations, the Viikki School is at the top of Finland's comparable schools; in 2016, student grades ranked fifth among all Finland's upper secondary schools.

3. Data and Methods

3.1. Participants. Students ($N = 607$) answered an online questionnaire under the supervision of their teachers. Most of the students identified themselves as either female ($n = 337$, 54%) or male ($n = 263$, 42%; Table 1). The students ranged in age from 9 to 19 ($M = 13.55$, $SD = 2.47$). The mother tongue of the majority (86%) was Finnish. The response rate was 83 percent (for grades 4–6, 91%; grades 7–9, 92%; and I–III, 64%).

3.2. Measurements. This study utilized Dweck's instrument ([6] pages 177-178), which measures beliefs about the nature of intelligence and giftedness as either malleable or incremental ([24], see also [23]). We used three original entity items (Table 2), which is designed for children over 10 years of age and adult respondents. We further applied and tested one adult item (item 3 in Table 2) in the entire sample. The participants were asked to evaluate their attitudes to eight statements on a six-point Likert scale (1 = strongly agree, 6 = strongly disagree), of which four statements were related to intelligence and four to giftedness. Higher scores indicated a malleable view.

In order to study the students' academic achievements, their grades in mathematics and the Finnish language were

TABLE 2: Factor loadings, communalities (h^2), and percentages of variance for principal factors extraction and direct oblimin rotation on mindset items.

Item	<i>N</i> = 607 <i>M</i> (<i>SD</i>)	Principal component analysis <i>n</i> = 295		h^2	Confirmatory factor analysis <i>n</i> = 312
		Factor 1	Factor 2		Standardized coefficients
Mindset about intelligence	4.19 (1.07) $\alpha = .803$				
(1) <i>You have a certain amount of intelligence, and you really cannot do much to change it.*</i>	4.42 (1.26)	-.02	.82	.65	
(2) Your intelligence is something about you that you cannot change very much.	4.09 (1.23)	.05	.84	.75	.81
(3) To be honest, you cannot really change how intelligent you are.	4.46 (1.29)	-.03	.79	.61	.81
(4) You can learn new things, but you cannot really change your basic intelligence.	4.03 (1.28)	.02	.77	.61	.73
Mindset about giftedness	3.60 (1.37) $\alpha = .931$				
(5) You have a certain amount of giftedness, and you really cannot do much to change it.	3.69 (1.51)	.88	.07	.84	.87
(6) Your giftedness is something about you that you cannot change very much	3.52 (1.49)	.93	-.01	.85	.89
(7) To be honest, you cannot really change how gifted you are	3.66 (1.54)	.89	.02	.81	.92
(8) You can learn new things, but you cannot really change your basic giftedness.	3.51 (1.50)	.92	-.07	.79	.86
Percent of variance		52.07	21.65		

*Based on confirmatory factor analysis the italicized item was omitted from further analysis; scale of 1–6, higher scores indicate a malleable view.

computed from their school reports in 2016. The grades were not based on standardized tests; instead, they were a combination of tests, homework, classroom participation, and the teacher's evaluation of each student's effort. In basic education, a student's individual outcomes are compared only with his/her own previous outcomes, and the assessment is intended to be process-oriented ([29] pages 49-50). In upper secondary school, grades are also based on multiple kinds of evidence, including exams, discussions, and the teacher's observations [30]. However, in both basic education and upper secondary education, the evaluation is intended to assess students' knowledge and skills, not their personal characteristics. Nevertheless, in upper secondary school, the expectations and goals differ from basic education, and the courses and exams are academically more demanding. This might explain why the grades of the academically gifted Viikki upper secondary school students are seemingly lower than the basic education students' grades and lower than their entrance GPAs might indicate.

4. Results

To study the invariance of the measurements and whether the two sets of items are different from each other, first a principal component analysis was conducted for approximately 50 percentage randomly chosen participants ($n = 295$). Direct oblimin for oblique rotation was utilized, since

it was assumed that factors would correlate [47]. The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis on a good level, $KMO = .831$ ([47] page 685). Two factors had eigenvalues over Kaiser's criterion of 1. A two-factor structure appeared to be the most appropriate also based on the scree plot, which explained 73.72% of the variance. Factor loadings were between .77 and .93 (Table 2). The internal consistency of Dweck's items was studied with Cronbach's alpha values [48], which was .822 for implicit beliefs about intelligence and .926 for implicit beliefs about giftedness.

Secondly, a confirmatory factor analysis was conducted with the other 50 percentage of the data ($n = 312$) by AMOS 24 (Table 2). After the first intelligence item was omitted from the model, the *RMSEA* estimate of .096 was within the fit level of .069–.125 (Table 3), indicating mediocre fit [49]. Incremental fit measures showed that the proposed model exceeds the baseline model ($NFI = .967$, $TLI = .969$, $CFI = .975$, and $RMR = .053$). These results indicate satisfactory generalizability of the model. Reliability coefficients were for mindset about intelligence .823 and for mindset about giftedness .934.

Bivariate Pearson correlational analyses (Table 4) were conducted to investigate how students' implicit beliefs about intelligence and giftedness were related to each other, age, gender, and academic achievement in mathematics and Finnish language. The results showed that the implicit beliefs

TABLE 3: Goodness-of-fit values of implicit beliefs about intelligence and giftedness scale.

	Students ($n = 312$)
<i>Absolute fit measures</i>	
χ^2	50.318
df	13
p	.000
RMSEA	.096
90% CI	.069 .125
<i>Incremental fit measures</i>	
NFI	.967
TLI	.969
CFI	.975
RMR	.053

about intelligence and giftedness correlated moderately in the whole data ($r = .403$, $p < .01$). More specifically, as can be seen in Table 5, correlations between the two concepts were strongest among 9-10- and 11-year-olds ($r = .601$, $r = .547$, resp., $p < .01$). Also paired samples t -tests showed that youngest students, who were 9 to 12 years old, did not understand that the nature of intelligence and giftedness is statistically significantly different. Instead, older students made this distinction (Table 5). Further, age was positively but weakly related to implicit beliefs about intelligence ($r = .144$, $p < .01$) and negatively with giftedness ($r = -.114$, $p < .01$) (Table 4). One-way analyses of variance (ANOVA) showed that the variances between students from different ages were statistically significant ($F_{\text{intelligence}}(8) = 5.870$, $p = .000$, and $\eta_p^2 = .074$; $F_{\text{giftedness}}(8) = 2.794$, $p = .005$, and $\eta_p^2 = .036$). More specifically, pairwise comparisons (Table 5) located statistically significant differences related to intelligence between the youngest students (9–11-year-olds) and the 13–15-year-olds, the former ones having the most stable views of intelligence and latter ones the most malleable views. Regarding the nature of giftedness, 13-year-olds were the most growth-oriented toward this topic and differed statistically significantly from 16- and 17-year-olds, who scored the lowest, thereby indicating the most stable ideas about giftedness among the students.

With correlational analysis and a t -test, gender differences were established only for perceptions about the nature of giftedness ($t_{\text{giftedness}}(598) = 3.623$, $p = .000$, and $r_{Y1} = .149$), indicating that female students ($M = 3.77$; $SD = 1.31$) were more inclined to think giftedness as more malleable than male students ($M = 3.36$; $SD = 1.41$). No gender differences were found in implicit beliefs about intelligence.

The correlations were low ($r < .10$) between students' implicit beliefs and academic learning outcomes, and only the grades in mathematics correlated statistically significantly with implicit beliefs about giftedness. However, this correlation was negative.

Regression analyses with enter method was conducted to analyze whether implicit beliefs and background variables

gender and age predict academic achievement in mathematics and Finnish language. As shown in Table 6, regarding mathematics age and implicit beliefs about intelligence and giftedness accounted for a significant but small amount of variance ($R^2 = .05$, $p < .001$). Younger age and a growth mindset about intelligence but a fixed mindset about giftedness predicted higher grades in mathematics. Regarding Finnish language only age accounted for a significant amount of variance ($R^2 = .03$, $p < .01$) indicating that younger age was associated with higher grades.

5. Discussion

This study investigated students' ($N = 607$) implicit beliefs about intelligence and giftedness. The study was conducted at the Viikki Teacher Training School at the University of Helsinki, Finland, which can be regarded as an ideal Finnish school with especially high quality teaching-studying-learning facilities. The participating Viikki students were in elementary school ($n = 200$; 9–12-year-olds), lower secondary school ($n = 256$; 13–15-year-olds), and upper secondary school ($n = 151$; 16–19-year-olds).

The results showed that students' implicit beliefs about the nature of intelligence and giftedness shared similarities but were also distinct. The nature of intelligence was seen as being more malleable than giftedness, and the result was in line with the study of gifted American high school students by Makel et al. [23].

Besides domain-specific variance, our study found age and gender related differences in students' views. Elementary school students who were 9–11 years old saw the nature of intelligence and giftedness as being relatively similar and stable. Older students (12–19-year-olds) seemed to make more distinction between the concepts, with intelligence being more likely to develop than giftedness, in line with the findings of Makel et al. [23]. The most fixed views about the nature of giftedness were among the upper secondary school students, who, having been accepted at Viikki, can be described as high achieving students. In general, the results seem to support Dweck's [25] argument that giftedness is more easily associated with fixed ideas, at least among older and male students. However, the connection between giftedness and fixedness is not straightforward, as was indicated by relatively high means and standard deviations (see Tables 2 and 5).

Despite the low effect size, our results verified the notion that mathematics is a subject domain that is particularly related to students' implicit beliefs [50]. By examining the relation between implicit beliefs about intelligence and students' academic achievements, it was found that growth-oriented views indicated higher grades in math. This result is in accordance with Dweck's [6] theory as well as a large body of empirical studies (e.g., [18]). However, to some extent it was surprising to find that fixed ideas about giftedness predicted higher math grades. Since this study is the first to investigate this relation, the result needs to be interpreted cautiously and more research is needed. The result indicates that the relationship between implicit beliefs and achievement might not be as straightforward as previous studies have suggested.

TABLE 4: Bivariate Pearson correlations.

	Implicit beliefs about intelligence	Implicit beliefs about giftedness	Age	Gender	Math
Implicit beliefs about giftedness	.403**				
Age	.144**	-.114**			
Gender	-0.013	-.147**	-.101*		
Math	0.059	-.097*	-.121**	-0.029	
Finnish	-0.063	-0.055	-.138**	-.318**	.461**

* $p < .05$; ** $p < .01$.

TABLE 5: Implicit beliefs about intelligence and giftedness among different age groups.

Age	N	Implicit beliefs about intelligence $\alpha = .803$		Implicit beliefs about giftedness $\alpha = .931$		r	Paired samples t -test
		M	SD	M	SD		
9-10	88	3.75 ^a	1.22	3.59	1.36	.601**	$t(87) = 1.364$
11	68	3.79 ^b	1.32	3.71	1.35	.547**	$t(67) = .542$
12	68	4.14	0.98	3.87	1.25	.291*	$t(67) = 1.631$
13	73	4.63 ^{ab}	0.93	4.04 ^c	1.25	.418**	$t(72) = 4.137***$
14	86	4.41 ^{ab}	0.98	3.59	1.45	.390**	$t(85) = 5.462***$
15	76	4.42 ^{ab}	0.82	3.56	1.45	.364**	$t(75) = 5.428***$
16	61	4.29	1.03	3.25 ^c	1.3	.311*	$t(60) = 5.868***$
17	44	4.09	0.96	3.09 ^c	1.21	.259	$t(43) = 4.958***$
18-19	36	4.18	0.93	3.41	1.42	.423*	$t(35) = 3.467**$
Total	607	4.19	1.07	3.6	1.36	.403**	$t(606) = 10.949***$

* $p < .05$, ** $p < .01$, and *** $p < .001$; scale of 1–6, higher scores indicate a malleable view; age group 9-10 included ten students who were nine-year-olds and age group 18 included three students who were 19-year-olds; means sharing the subscripts differed statistically significantly ($p < .05$) in pairwise comparisons conducted with Games-Howell's test (a, b) and with Tukey HSD's test (c).

TABLE 6: Regression analyses for predictors of academic achievement in mathematics and Finnish language.

	Mathematics			Finnish language		
	B	β	R^2	B	β	R^2
			.05***			.03**
Implicit beliefs about intelligence	.168	.168***		.074	.073	
Implicit beliefs about giftedness	-.198	-.197***		-.071	-.071	
Age	-.179	-.178***		-.154	-.156**	
Gender	-.079	-.079		-.073	-.073	

** $p < .01$; *** $p < .001$.

It should be also questioned whether the grade is the best indicator of academic achievement, as it is not an objective indicator and it seems that younger students achieve higher grades more easily than older students. Furthermore, this study raises the question of whether implicit beliefs about giftedness might reflect students' self-assurance in their skills. For example, among Greek 5th-6th grade students, implicit beliefs about intelligence did not result in higher grades in math or languages; instead, previous school achievements affected implicit beliefs and were mediated by perceived academic competence [20].

Even though this study supported the findings of previous studies, it also provided new aspects and questions about implicit beliefs, especially about giftedness. Because this is a case study from a single school and one that can also be described as a special school in a Finnish context, this research cannot be generalized to all Finnish students. Still, the results were similar to those found by Makel et al. [23] and could be explained by the fact that, in the Viikki School, students across all levels were relatively high achievers. Still, more research is needed from different contexts in Finland, since especially in the Helsinki metropolitan area, schools are

regionally segregated by socioeconomic class [51]. It has been shown that students with low socioeconomic or minority backgrounds are especially vulnerable to the effects of a fixed mindset about intelligence (e.g., [7, 8, 18]). The sample for this study was cross-sectional, providing an overview of students' implicit beliefs at a specific time. Thus, longitudinal research designs are needed to examine both the domain-specific (e.g., giftedness and intelligence) and the subject-specific (e.g., mathematics and language) nature of implicit beliefs as well as developments related to age. Furthermore, students' conceptions of intelligence and giftedness should be investigated further in order to determine how these concepts are constructed and to understand more about implicit beliefs and their role in talent development.

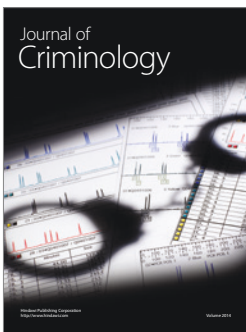
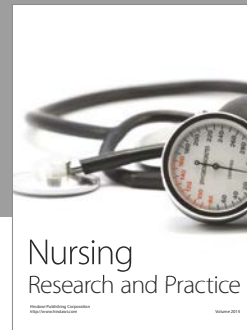
Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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