

# Exploring situated expectancy-value theory: A study of gendered higher education choices<sup>1</sup>

---

**Ivana Pikić Jugović<sup>2</sup>** 

*Institute for Social Research in Zagreb, Centre for Educational Research  
and Development, Zagreb, Croatia*

**Karin Doolan** 

*Department of Sociology, University of Zadar, Croatia*

**Branislava Baranović** 

*Institute for Social Research in Zagreb, Centre for Educational Research  
and Development, Zagreb, Croatia*

The paper explores the way in which motivational beliefs, gender roles and stereotypes, cultural resources and practices shape students' choices of university courses in technical sciences and social sciences and humanities. It is grounded in Eccles et al.'s situated expectancy-value theory, with an emphasis on the importance of its gender dimension, as well as sociocultural background as expressed through cultural capital indicators. Questionnaire data were collected from 1301 secondary school students in Croatia. Results indicate that motivational beliefs, especially utility values, are the strongest predictors of study choice for both young women and men. Traditional gender roles predict weaker intentions to choose gender non-stereotypical courses. Endorsing gender stereotypes about a lesser talent of one's own gender for occupations in technical sciences or social sciences and humanities predicts weaker intentions to choose courses in those fields of study. Finally, reading practices, serving as an indicator of cultural capital, add to the explanation of social science and humanities course choices for both young women and men. The implication of the study is the need to create intervention programmes aimed at deconstructing gender roles and challenging pupils' stereotypes about educational domains and occupations.

**Keywords:** situated expectancy-value theory, educational choices, gender, motivation, secondary school students

---

1 This paper has been fully supported by the Croatian Science Foundation under the project "Social identities, higher education access and course choice" (09.01/404).

2 jugovic@idi.hr

## Introduction

Available data have consistently shown that women are underrepresented as graduates in STEM courses, especially in computer sciences and engineering, whereas men are underrepresented in social sciences and humanities (Eurostat, 2024; Verdugo-Castro et al., 2022). This is a problem which has been addressed by researchers and policy-makers alike (Council of Europe, 2018), and our research is an attempt to contribute to understandings of this gender gap from an educational psychology perspective, by using situated expectancy-value theory, developed by Eccles and associates, as a framework (Eccles et al., 1983; Eccles & Wigfield, 2020).

The existing literature suggests that the role of motivation in educational choices has been consistently confirmed in numerous studies, but also that the role of gender stereotypes, gender roles, as well as sociocultural background, has been under-researched within situated expectancy-value theory (Eccles & Wigfield, 2020, 2024). Therefore, we wish to further explore the gender dimension of education choices and to additionally examine certain indicators of cultural capital within this theoretical approach. Cultural capital is a widely-used sociological concept introduced by Pierre Bourdieu (1973, 1984, 1986) in order to capture the educational effects of family sociocultural background. Using indicators of cultural capital to explore the role of students' sociocultural background is a novel approach within situated expectancy-value theory. Our goal is to explore factors that shape young women's and men's choices of higher education courses in stereotypically male (technical sciences) and stereotypically female (social sciences and humanities) fields of study, based on research encompassing a nationally representative sample of final-year secondary school students from Croatia. Although the article peruses the data from Croatia to examine this dynamic, gendered higher education choices can be observed across many other educational contexts (e.g. Eurostat, 2024).

## Theoretical and empirical overview

Eccles' situated expectancy-value theory has been widely used in empirical research in order to examine gendered educational choices and academic achievement. The theory proposes that educational choices and academic achievement are directly influenced by two sets of motivational beliefs: expectancies of success and subjective task values. Expectancies of success are defined as individual beliefs in how successful one will be at a particular activity in the future. Expectancies are measured similarly to Bandura's (1997) self-efficacy, defined as the personal judgment of one's capabilities to produce specific performance attainments. Expectancies are also closely related to the ability self-concept, which is considered to encapsulate broader beliefs

about competence in a certain field (Eccles & Wigfield, 2002). Although expectancies of success are theoretically distinguished from the ability self-concept, they are usually not separable empirically and are measured via one instrument (Eccles & Wigfield, 2020).

Subjective task values are values an individual attaches to a certain task or activity. Situated expectancy-value theory proposes four components of task values: utility value, intrinsic value, attainment value and cost (Eccles & Wigfield, 2020). Utility value is conceptualised as perceived usefulness of the task in meeting immediate or long-term goals, such as pursuing an educational path or choosing a career, pleasing parents' desires, or spending time with friends. Students will engage in an activity if they find it useful, no matter how interested in it they are. Intrinsic value or interest is anticipated enjoyment one expects to experience from performing a task or choosing an activity. A person will be more motivated for a task that has higher intrinsic value. Attainment value is defined as personal importance or identity-based importance of doing well at the task. The authors consider that an activity is perceived as more important if engaging in it provides an opportunity to confirm prominent aspects of one's own identity, such as masculinity, femininity or competence. Perceived cost is conceptualised in terms of negative aspects of engaging in a task (e.g. amount of effort required to succeed in a task).

The authors further propose that expectancies of success and subjective task values are shaped by one's goals and general self-schemata, gender roles and gender stereotypes related to activities. Eccles et al. (1983) have defined gender roles as behaviours that are in accordance with a set of social prescriptions for gender-appropriate conduct. Furthermore, studies have examined gender stereotypes about performance in school subjects or talent for educational domains or careers (Eccles et al., 1983; Greene et al., 1999). Situated expectancy-value theory hypothesises that negative gender stereotypes about talent or performance of one's own gender in mathematics, sciences or languages can have adverse effects on educational choices and achievement in the related domains (Eccles, 1987). It is hypothesised that girls who endorse stereotypes about maths and science as male domains are less likely to study these domains, because their expected (feminine) gender role is incongruent with the masculine image of the STEM field (Eccles, 1987). Finally, it is expected that educational choices are shaped by sociocultural factors, such as the cultural milieu, parents' and teachers' beliefs, as well as student's previous achievement-related experiences.

Recent research conducted in the United States has highlighted the importance of both the expectancies of success and task values in predicting educational choices or the intentions (Fong et al., 2021; Lauermann et al., 2017). Other studies from the United States (Lauermann et al., 2015) and

Croatia (Jugović, 2017) have additionally shown that subjective task values were stronger predictors of educational choices than expectancies of success. A longitudinal study conducted in Germany and England showed that students' high ability self-concept in mathematics predicted entry into STEM university courses, whereas the high ability self-concept in the English language predicted entry into the social sciences and humanities (Parker et al., 2012).

The findings from China, Croatia and the United States also indicate that students' stereotypes about mathematics and physics as male domains predicted female students' lower academic achievement and expectancy of success, weaker intentions to pursue higher education in these domains, as well as stronger fear of mathematics (Jugović, 2017; Jugović et al., 2012; Song et al., 2017; Simon et al., 2016; Star et al., 2023; Starr & Simpkins, 2021). Endorsing a more feminine gender role predicted young men's and women's decision not to study STEM university courses in the Croatian education context (Jugović, 2017), as well as young women's decision not to participate in 'masculine' sports in France (Guillet et al., 2006). Some studies have also shown that motivational beliefs mediated the effect of gender roles and stereotypes on educational choices (e.g. Guillet et al., 2006; Song et al., 2017; Wegemer & Eccles, 2019). However, in some other less recent research, gender roles made little or no contribution to explaining educational outcomes (DeBacker & Nelson, 1999; Greene et al., 1999). The literature review suggests that motivational beliefs have been shown to be stronger predictors of educational outcomes than gender related variables (Greene et al., 1999; Jugović, 2017). In addition, the results on the impact of gender roles and stereotypes on educational outcomes have been inconsistent, and gender role measures used in some studies were of questionable validity (Jugović, 2010c), which calls for further elaboration and exploration of this part of the model.

Recent studies within situated expectancy-value theory have motioned to the importance of socioeconomic status and parental educational level for students' academic motivation and achievement (Harackiewicz et al., 2016; Parker et al., 2020). However, in their recent papers, Eccles and Wigfield (2020, 2024) have argued that more theoretical elaboration of the "left side" of the model and the exploration of how sociocultural background contributes to gendered educational choices is still needed. Recent theoretical and empirical work has explored the concept of "cultural milieu" as a means of addressing cultural, racial, ethnic, and gender influences within situated expectancy-value theory. For instance, Tonks et al. (2018) and Wigfield and Gladstone (2019) have initiated discussions on the significance of culture and ethnicity in shaping students' expectancies and values. Additionally, Matthews and Wigfield (2024) have suggested incorporating a racial perspective into the model by expanding the cultural milieu and socialisation elements to gain a deeper understanding of the development of Black students' motivational beliefs.

In order to acknowledge the importance of sociocultural influences in shaping higher education choices within situated expectancy-value theory,

we explored certain indicators of cultural capital in our research study. The concept of cultural capital was introduced by the sociologist Pierre Bourdieu (1986, 1973, 1984) to explain the differences in the educational pathways of pupils who come from different class backgrounds. He found that the students from the “dominant class”, who had high cultural capital, were more likely to continue to higher education and choose prestigious higher education institutions and courses since their cultural capital “fitted” with such institutional options. For Bourdieu (1986), such cultural capital existed in three forms: embodied (linguistic competences and cultural tastes), objectified (cultural goods such as paintings and books) and institutionalised (educational qualifications). Subsequent operationalisations of cultural capital have not been uniform. Variables have included cultural activities and tastes, such as the frequency of theatre going, museum going, reading books and musical preferences (e.g. Albert et al., 2018), as well as parents’ educational level and educational field (e.g. Flemmen, 2012).

In educational research, Lareau and Weininger (2005) and Reay (2004) have identified a tendency to operationalise cultural capital as “highbrow” cultural activities. DiMaggio’s (1982) influential work on school success, for example, defined cultural capital as an interest in art, classical music, literature, frequency of attending art events and cultural knowledge. Ganzeboom et al. (1990), as well as De Graaf et al. (2000), have also measured cultural capital in terms of consumption of “high” culture, which manifests itself as the frequency of visits to theatres and museums, while incorporating reading practices as an activity which is specific to educational experiences. Our exploration of certain indicators of cultural capital (reading practices, cultural practices) leans on this dominant, quantitative approach to operationalising cultural capital. However, we have integrated such operationalisations of embodied cultural capital with indicators of institutionalised cultural capital (parental educational level), as well as objectified capital (the number of books in one’s home). This approach provides insight into how “conventional” cultural capital indicators compare across different studies. For example, writing about youth and culture in Croatia, Krolo et al. (2016) found that parents’ embodied cultural capital (e.g. visiting museums, classical music concerts) predicted more significantly children’s cultural preferences than the educational level of their parents or the number of books in their household. However, we also acknowledge criticism of this conventional approach and the value of expanded understanding of cultural capital as “much more than the high status activities that have traditionally been operationalised in empirical research within education” (Reay, 2004, p. 75).

In terms of the specific focus of our study, educational research has shown that, in the Danish context, students from the culturally privileged classes tended to choose courses in the arts, humanities and “soft” social science programmes (Thomsen, 2012), as well as that higher parental education predicted young men’s choice of female-dominated occupations in the United

States (Hardie, 2015). Furthermore, in the Chinese context, students with higher cultural capital (operationalised through variables such as books in the household, fathers' educational level and participation in cultural activities) were more likely to choose a higher education course in the liberal arts fields than in the STEM fields (Hu & Wu, 2019). Thomsen (2012) has offered a possible explanation of such findings: unlike their peers with lower levels of cultural capital, students with higher levels are less focussed on obtaining a qualification which is societally constructed as "useful" for the labour market. Finally, in his work, Bourdieu did not engage with the gender dimension of such classed educational dispositions. However, as Evans (2009, p. 351) has pointed out, "a dynamic model of cultural capital must be one that integrates the gendered aspirations that individuals have".

### The present study

Our literature review has pointed to several issues: a) motivational beliefs as stronger predictors of educational outcomes in the STEM field than gender-related variables, b) negative effects of gender stereotypes in the STEM field on female students' educational outcomes, and c) mixed findings on the impact of gender roles on educational outcomes (Greene et al., 1999; Guillet et al., 2006; Jugović, 2017; Starr & Simpkins, 2021). In addition, d) higher cultural capital was shown to predict students' choices in the arts, humanities and social science programs (Hu & Wu, 2019; Thomsen, 2012). Our literature review additionally suggests that there is a need to further explore the role of masculinity, femininity and gender stereotypes in shaping educational choices in stereotypically male and stereotypically female educational domains in a comprehensive way, since most studies have focussed on one or the other domain. In addition, and, given that "cultural milieu" has been under-researched within situated expectancy-value theory, we also explore whether certain indicators of cultural capital additionally explain educational choices within situated expectancy-value theory.

The aim of this study is to explore how expectancies of success and task values for mathematics and the Croatian language, gender stereotypes and gender roles, as well as cultural resources and practices, shape students' choices of courses in technical sciences (TS) and social sciences and humanities (SSH). Given that the depictions of the sociocultural aspect of the situated expectancy-value theory model vary (see Eccles, 2009; Eccles & Wigfield, 2020), but nevertheless open a possibility to include such factors as cultural capital at the far-left side of the model, we decided to position cultural capital in the first block in the regression analysis (Figure 1). Students' gender roles and stereotypes were included in the second block, following Eccles' (1987) depiction, and motivational beliefs in the third. Mathematics as a school subject and technical sciences courses were selected to represent

a stereotypically male educational domain, whereas the Croatian language as a school subject and social sciences and humanities courses were chosen to represent a stereotypically female domain. In the Croatian context, at the tertiary level, women are underrepresented in the field of technical sciences (28.9% of students are women), whereas men are underrepresented in the social sciences (34.1% of students are men) and humanities (27.2% are men) (Croatian Bureau of Statistics, 2023).

Based on Eccles' situated expectancy-value theory, as well as available research (e.g. Hu & Wu, 2019; Jugović, 2017; Starr & Simpkins, 2021), the following hypotheses are proposed:

H1: Motivational beliefs are the strongest predictors of educational choices, compared to other predictors.

H2: Endorsing negative stereotypes about the talent of one's own gender in occupations in technical sciences and social sciences and humanities is related to weaker intentions of choosing higher education courses in these domains.

H3: Traditional gender roles (higher femininity and/or lower masculinity for young women, and vice versa for young men) are related to a weaker intention to choose gender non-stereotypical courses (technical sciences for young women or social sciences and humanities for young men).

H4: Having higher cultural capital is related to stronger intentions to choose courses in social sciences and humanities.

The regression model containing three blocks of predictors and criterion variables explored in this paper is depicted in Figure 1. It is based on a simplified version of Eccles et al. situated expectancy-value model (Eccles, 1987; Eccles & Wigfield, 2020), with added cultural capital indicators, including only the variables explored in the current study.

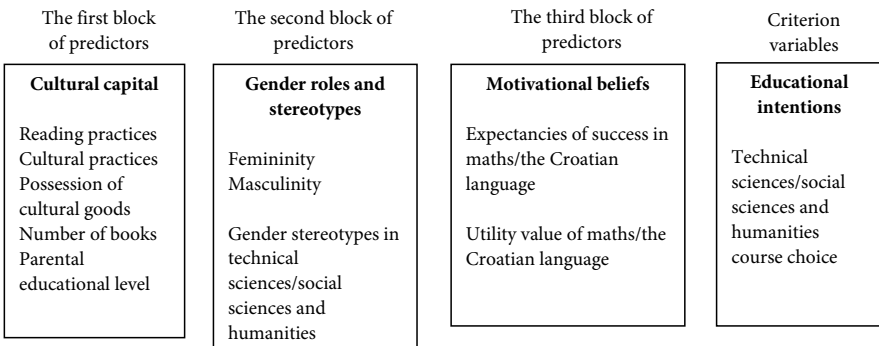


Figure 1. The regression model containing three blocks of predictors and criterion variables explored in this study

## Methods

### *Participants and procedure*

The sample included 1301 final-year secondary school students from grammar schools (46.7%) and four-year vocational schools (53.3%) from across Croatia. There were 679 young women (52.2%) and 622 young men (47.8%) in the sample. On average, students were 18 years old. This sample was a part of a larger study on the decisions to continue to higher education conducted in 2014 on a 5% nationally representative sample of Croatian final-year secondary school students (N=2106 from 98 schools) (for more details on the project, see Baranović, 2015). Only those students who intended to continue to higher education were included in our analysis. Students filled in the questionnaire in their classrooms after they had provided their informed consent: participation was voluntary and anonymous.

The study was conducted in strict adherence to the Code of Ethics for Research with Children (Ajduković & Kolesarić, 2003). The approval for conducting the study was obtained from the relevant Ministry of Education, as well as from the participating schools. To uphold the principles of voluntary participation and anonymity, all students were informed about the study's objectives, procedures, and their rights prior to participation. Informed consent was obtained from each participant, and all the participants were made aware of their right to withdraw from the study at any point without any repercussions and their freedom to omit responses to any questions they found uncomfortable. It was emphasised to the participants that their teachers, school staff and parents would not have access to their individual data. Parents or guardians were also notified about the study in advance. Students filled in the questionnaire in their classrooms during the time that was reserved for this study. Data collection was conducted by trained survey administrators, who had received training from the research team to ensure adherence to ethical and methodological standards. To maintain participant confidentiality, the data were analysed and reported solely at the aggregate level, with individual data accessible only to the research team.

### *Instruments*

*Educational intentions to choose technical sciences (TS) and social sciences and humanities (SSH).* Participants were asked the following: 'How likely is it that you are going to try to enrol into the following university courses of study?'. The first item was 'Course in technical sciences, e.g., electrical engineering, computer science, mechanical engineering, naval architecture, civil engineering', and the second 'Course in social sciences and humanities, e.g., economics, law, political science, sociology, psychology, philosophy, pre-school education'. Participants could respond on a five-point Likert type scale to both questions (1 = extremely unlikely; 5 = extremely likely).



## Motivational beliefs.

*Expectancies of success in mathematics/Croatian language*<sup>3</sup> were measured with 6 items for each subject (e.g. 'How successful do you think you would be in a university course where knowledge of mathematics/the Croatian language is important?'). Participants responded on a five-point bipolar scale (1 = completely unsuccessful; 5 = completely successful). Factor structures of scales in both school subjects were unidimensional ( $\alpha_{\text{Maths}} = .90$ ;  $\alpha_{\text{Cro}} = .93$ ).

*Subjective task values of mathematics/the Croatian language* were measured with three items on interest (e.g. 'How interested are you in mathematics/the Croatian language?'), three items on attainment value (e.g. 'How important is it for you personally to get high grades in mathematics/the Croatian language?'), and three items on utility value (e.g. 'How much will what you are learning in mathematics/the Croatian language be useful to you in the future?'). Responses were provided on a five-point bipolar scale (1 = not at all; 5 = fully). Factor analysis revealed a two-factor structure for each school subject: a) utility value ( $\alpha_{\text{Maths}} = .84$ ;  $\alpha_{\text{Cro}} = .87$ ) and b) interest/attainment value ( $\alpha_{\text{Maths}} = .89$ ;  $\alpha_{\text{Cro}} = .91$ ) (for more details on all instruments see Baranović, 2015).

*Gender stereotypes about talent in occupations.* Participants were asked to indicate who was more talented in occupations in the technical sciences domain and occupations in the social sciences and humanities domain. Possible answers were the following: 1 = Women, 2 = Women and men equally, 3 = Men. The indicator of a gender stereotypical response for the first question was the answer 'Men', and for the second 'Women'.

*Gender Roles in Adolescence Scale.* Femininity and masculinity were each measured with 10 items about adolescents' behaviours, traits and interests across various aspects of their lives including family, school, leisure, appearance and intimate relationships (Jugović, 2010a; Jugović & Kamenov, 2008) (e.g. 'I am very sensitive', 'I like to watch sports competitions'). Participants were asked how typical of them each of the behaviours and traits was on a five-point Likert scale (1 = not at all; 5 = fully). Reliability was high ( $\alpha_{\text{Femininity}} = .86$ ;  $\alpha_{\text{Masculinity}} = .80$ ). Higher scores indicated being more feminine/masculine.

*Institutionalised cultural capital – The highest level of education completed by students' parents.* Participants were asked to indicate the highest educational level completed by their mother and father (from 1 = Incomplete primary school, to 8 = Master's or doctorate degree). A new variable for the combined mother's and father's highest educational level was created, with four categories: 1 = Both parents have in/complete primary schooling, 2 = At least one parent has completed three-year vocational schooling, 3 = At least one parent has completed grammar schooling/four-year vocational schooling,

---

3 The items measuring the expectancies of success, subjective task values and gender stereotypes were in part based on the items used in empirical studies drawing on situated expectancy-value theory (e.g. Eccles & Wigfield, 1995), which were modified to fit the Croatian context (e.g. Jugović, 2010a).

4 = At least one parent has completed college/university education. Higher scores indicate higher cultural capital.

*Embodied cultural capital – Students' reading practices.* Participants were asked how often they read 'daily or weekly newspapers articles about politics or culture', 'popular-scientific journals or magazines with topics from culture', 'fiction', and 'prose and poetry' that were not a part of their school obligations. Possible answers ranged from 1 = never or almost never to 5 = a few times a week or every day ( $\alpha=.67$ ). Higher scores indicate higher cultural capital.

*Students' cultural practices.* Students indicated how often they 'visited museums or art galleries', 'went to the theatre', and 'visited the opera, ballet or classical concerts' during the last year (from 1 = never to 4 = more than four times). The scale was unidimensional ( $\alpha=.77$ ).

*Objectified cultural capital – Possession of cultural goods.* Participants were asked whether they had 'professional books or manuals', 'classical literature books', 'books written in a foreign language', 'works of art like paintings or sculptures' and 'CDs or other recordings of classical or jazz music' in their home (0 = no, 1 = yes). The overall result was created by adding the values of all five items. Higher scores indicate higher cultural capital.

*The number of books in the household.* Students estimated the number of books in their homes on a six-point scale (1 = '0–10', 2 = '11–25', 3 = '26–100', 4 = '101–200', 5 = '201–500', and 6 = 'more than 500 books').

## Results

### *General descriptive results*

A one-way multivariate analysis of variance (MANOVA) with gender as an independent variable and course choices, indicators of cultural capital, gender roles and motivational beliefs as dependent variables was statistically significant ( $F=110.83, p=.001$ ). Results of the tests of between-subjects' effects are presented in Table 1. Chi-square tests for gender differences in endorsing gender stereotypes are presented in Table 2.

Table 1

*Means, Standard Deviations and One-Way Multivariate Analysis of Variance in Course Choices, Indicators of Cultural Capital, Gender Roles and Motivational Beliefs*

	Young women		Young men		F(1/1156)	$\eta_p^2$
	M	SD	M	SD		
TS course choice	1.80	1.29	3.33	1.61	319.22***	.219
SSH course choice	3.24	1.56	2.19	1.46	137.46***	.108
Reading practices	2.50	0.89	2.53	0.92	0.36	.000
Cultural practices	1.94	0.71	1.77	0.70	17.56***	.015
Possession of cultural goods	3.65	1.35	3.65	1.35	0.05	.000

Number of books	3.28	1.40	3.37	1.43	1.13	.001
Parental educational level	3.22	0.74	3.27	0.76	1.43	.001
Femininity	3.72	0.64	2.75	0.73	577.24***	.336
Masculinity	2.87	0.60	3.54	0.68	313.47***	.216
Expectancies of success in mathematics	3.06	0.84	3.13	0.86	1.48	.001
Utility value of mathematics	2.64	1.04	2.83	1.10	9.33**	.008
Interest/attainment value of mathematics	2.99	1.02	2.87	1.06	3.99*	.003
Expectancies of success in the Croatian language	3.77	0.74	3.11	0.77	220.65***	.162
Utility value of the Croatian language	3.36	0.99	2.69	1.06	122.32***	.097
Interest/attainment value of the Croatian language	3.44	0.91	2.67	0.96	189.64***	.143

$\eta^2$ =partial eta-squared. TS = technical sciences; SSH = social sciences and humanities.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 2

*Frequencies and Chi-Square Results for Gender Stereotypes about Occupations in Technical Sciences (N=1298) and in Social Sciences and Humanities (N=1299)*

	Young women		Young men		$\chi^2(1)$	Cramer's V
	n	%	n	%		
Stereotype about TS occupations	535	79.0	530	85.3	8.79**	.082
Stereotype about SSH occupations	450	66.5	317	51.0	32.23***	.158

TS = technical sciences; SSH = social sciences and humanities.

\*\*  $p < .01$ . \*\*\*  $p < .001$ .

Compared to young men, young women were more likely to choose social sciences and humanities courses and less likely to choose technical sciences courses; they had higher expectancies of success, interest/attainment value, and utility value of the Croatian language (with effects sizes ranging from medium to large<sup>4</sup>). Young women had a slightly higher interest/attainment value, but a lower utility value of mathematics (with small effect sizes), whereas no gender differences were found in expectancies of success in mathematics<sup>5</sup>. Gender differences in motivational beliefs in mathematics were either statistically insignificant or, where significant, their effect sizes were small, pointing to similar motivational patterns of young men and women in mathematics. Young women scored higher on femininity and lower on masculinity, with large effect sizes. Gender stereotypes about occupations in technical sciences were more prevailing than the stereotypes

4 Cohen's recommendations (1992) and MRC CBU instructions (2018) were used for the interpretation of effect sizes.

5 Young women had higher grades in the Croatian language ( $t=4.14$ ,  $p < .001$ ) and mathematics ( $t=11.48$ ,  $p < .001$ ), but grades were not included in the regression analysis due to high correlations with the expectancies of success.

about occupations in social sciences and humanities, and, although young men were slightly more likely to endorse the former and young women the latter, the effects sizes were modest. No gender differences were found in the indicators of cultural capital, except for cultural practices, in which women participated more often, but that difference was modest in size.

Correlations between criterion variables and their predictors are shown in Table 3. As expected, the technical sciences course choice was positively related to expectancies of success, utility value and interest/attainment value in maths, while the social sciences and humanities course choice was positively related to all three motivational beliefs in the Croatian language for both samples. Where statistically significant, gender roles and stereotypes were related to course choices in the expected direction. All indicators of cultural capital were positively related to young men's social sciences and humanities course choices (and the parental educational level negatively with the technical sciences course choice). For young women, reading practices were positively correlated with both course choices, and cultural practices with the technical sciences course choice. The above-described correlations between the course choices and motivational beliefs were moderate, while those between the course choices and indicators of cultural capital, gender roles and stereotypes were modest.

Considering that the cultural capital indicators serve as an addition to the variables typically examined within the framework of situated expectancy-value theory, we considered it noteworthy to explore their associations as well. A consistent trend emerged here, showing positive correlations between young women's and young men's reading practices, cultural practices, and the possession of cultural goods with nearly all motivational variables. Additionally, a negative correlation was observed between gender stereotypes and the cultural capital indicators, including reading practices, cultural practices, and possession of cultural goods for both young men and women, as well as the number of books in the household for young women. Most cultural capital indicators, with the exception of parental educational level, were positively associated with the expressions of femininity in young men and masculinity in young women.

### *Predictors of course choices*

Separate hierarchical regression analyses were carried out in order to examine what predicts the intentions to choose courses in technical sciences (Table 4) and in social sciences and humanities (Table 5), each for young men and young women<sup>6</sup>.

---

6 In order to avoid multicollinearity which is expected when several motivational beliefs are simultaneously explored, two motivational beliefs were chosen for our analyses: expectancies of success and utility value.

Table 3  
Intercorrelations for Study Variables Disaggregated by Gender

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. TS course choice	-	-.39***	.12**	.11**	.07	.05	.08	-.26***	-.16***	-.10*	.11**	.36***	.43***	.34***	-.07	-.16***	-.10*
2. SSH course choice	-.45***	-	.10**	-.04	.03	.03	-.02	.11**	.10**	-.02	-.06	-.35***	-.28***	-.30***	.12**	.32	.18***
3. Reading practices	.01	.23***	-	.37***	.30***	.34***	.11**	-.17***	-.14***	-.04	.24***	.11**	.12**	.16**	.29***	.17***	.30***
4. Cultural practices	-.07	.15***	.39***	-	.34***	.37***	.23***	-.16***	-.14***	-.03	.15***	.15***	.09*	.11**	.23***	.02	.17***
5. Possession of cultural goods	-.07	.16***	.33***	.31***	-	.50***	.36***	-.13**	-.08*	.00	.14***	.06	.07	.02	.09*	.01	.05
6. Number of books	-.04	.10*	.21***	.30***	.49***	-	.36***	-.11**	-.14***	-.12**	.10*	.14**	.04	.05	.17***	-.03	.06
7. Parental educational level	-.09*	.09*	.03	.14**	.33***	.37***	-	-.02	-.04	-.07	.06	.15***	.03	.07	.12**	-.10*	.02
8. Stereotype about TS occupations	.04	-.07	-.07	-.10*	-.15***	-.04	-.04	-	.37***	.16***	-.04	-.13**	-.09*	-.10**	.00	.15***	.02
9. Stereotype about SSH occupations	.11**	-.19***	-.10*	-.11**	-.16***	-.04	-.03	.31***	-	.12**	-.04	-.17***	-.13**	.13**	.01	.06	-.01
10. Femininity	-.03	.13**	.26***	.24***	.18***	.11*	-.06	-.03	-.04	-	.19***	-.01	.07	.03	.08*	.19***	.14***
11. Masculinity	.19***	-.02	.18***	.04	.06	-.02	-.14**	.20***	.07	.45***	-	.16***	.15***	.18***	.05	.09*	.05
12. Expectancies of success in maths	.34***	-.26***	.03	.04	-.01	.14**	.09*	.04	-.13***	-.01	.07	-	.62***	.77***	.14***	-.11**	-.04
13. Utility value of maths	.43***	-.20***	.12**	.05	.01	.08	-.07	.03	.13***	.08	.17***	.64***	-	.68***	.04	.03	.01
14. Interest/attainment value of maths	.34***	-.27***	.11**	.07	.01	.13**	-.02	.02	-.12**	.11**	.17***	.74***	.71***	-	.12**	-.02	.10**
15. Expectancies of success in the Croatian language	-.14**	.27***	.31***	.26***	.16***	.08	.04	-.01	-.06	.12**	.06	.03	.04	.07	-	.41***	.70***
16. Utility value of the Croatian language	-.27***	.36***	.27***	.23***	.14***	.03	-.05	-.05	-.08*	.27***	.07	-.18***	-.04	-.04	.49***	-	.55***
17. Interest/attainment value of the Croatian language	-.25***	.26***	.34***	.25***	.15***	.05	-.04	-.06	.05	.26***	.06	-.16**	-.00	.07	.65***	.67***	-

Note. The results for the female sample (n=679) are shown above the diagonal. The results for the male sample (n=622) are shown below the diagonal.

TS = technical sciences; SSH = social sciences and humanities. Stereotypes: 1 = do not accept stereotype, 2 = accept stereotype.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

**Table 4**  
*Hierarchical Regression Results for the Technical Sciences Course Choices*

Variable	Young women					Young men				
	B	S.E.	$\beta$	R <sup>2</sup>	$\Delta R^2$	B	S.E.	$\beta$	R <sup>2</sup>	$\Delta R^2$
Step 1 (Cultural capital)				.02	.02*				.01	.01
Constant	1.04	0.27				3.89	0.35			
Reading practices	0.15*	0.07	.10*			0.11	0.08	.07		
Cultural practices	0.11	0.08	.06			-0.14	0.11	-.06		
Possession of cultural goods	-0.01	0.05	-.01			-0.09	0.06	-.08		
Number of books	0.00	0.05	.00			0.02	0.06	.02		
Parental educational level	0.07	0.08	.04			-0.10	0.10	-.05		
Step 2 (Gender roles and stereotypes)				.10	.08***				.06	.05***
Constant	2.84	0.48				2.74	0.60			
Reading practices	0.07	0.06	.05			0.07	0.08	.04		
Cultural practices	0.05	0.08	.03			-0.10	0.11	-.04		
Possession of cultural goods	-0.01	0.05	-.01			-0.10	0.06	-.09		
Number of books	-0.02	0.05	-.02			0.04	0.06	.04		
Parental educational level	0.06	0.08	.04			-0.07	0.10	-.03		
Gender stereotype in TS	-0.80***	0.13	-.26***			-0.10	0.20	-.02		
Femininity	-0.17*	0.08	-.09*			-0.30**	0.11	-.14**		
Masculinity	0.23**	0.09	.11**			0.58***	0.11	.25***		
Step 3 (Motivational beliefs)				.26	.16***				.24	.18***
Constant	1.66	0.45				1.20	0.56			
Reading practices	0.04	0.06	.03			0.00	0.08	.00		
Cultural practices	0.02	0.07	.01			-0.10	0.10	-.04		
Possession of cultural goods	-0.01	0.04	-.01			-0.06	0.06	-.05		
Number of books	-0.02	0.04	-.02			-0.03	0.05	-.02		
Parental educational level	0.04	0.07	.02			-0.05	0.09	-.02		
Gender stereotype in TS	-0.64***	0.12	-.20***			-0.08	0.18	-.02		
Femininity	-0.22**	0.07	-.11**			-0.26**	0.10	-.12**		
Masculinity	0.12	0.08	.05			0.43***	0.10	.18***		
Expectancies for success in maths	0.17*	0.07	.11*			0.22*	0.09	.12*		
Utility value of maths	0.41***	0.06	.33***			0.50***	0.07	.35***		
R <sub>Adj</sub> <sup>2</sup>					.25					.22

*Note.* B = unstandardised regression coefficients; S.E. = standard error;  $\beta$  = standardised regression coefficients; R<sup>2</sup> = squared multiple correlation; R<sub>Adj</sub><sup>2</sup> = adjusted squared multiple correlation. \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Stereotypes: 1 = do not accept stereotype, 2 = accept stereotype. TS = technical sciences.

**Table 5**  
*Hierarchical Regression Results for the Social Sciences and Humanities Course Choices*

Variable	Young women					Young men				
	B	S.E.	$\beta$	R <sup>2</sup>	$\Delta R^2$	B	S.E.	$\beta$	R <sup>2</sup>	$\Delta R^2$
Step 1 (Cultural capital)				.02	.02*				.07	.07***
Constant	3.06	0.32				0.69	0.31			
Reading practices	0.23**	0.08	.13**			0.28***	0.07	.17***		
Cultural practices	-0.25*	0.10	-.11*			0.14	0.10	.07		
Possession of cultural goods	0.05	0.06	.05			0.10	0.05	.09		
Number of books	0.00	0.06	-.00			-0.02	0.05	-.02		
Parental educational level	-0.03	0.10	-.02			0.08	0.09	.04		
Step 2 (Gender roles and stereotypes)				.04	.02**				.11	.04***
Constant	3.99	0.56				0.18	0.48			
Reading practices	0.27**	0.08	.15**			0.26***	0.07	.17***		
Cultural practices	-0.21*	0.10	-.10*			0.08	0.10	.04		
Possession of cultural goods	0.05	0.06	.05			0.06	0.05	.06		
Number of books	0.01	0.06	.01			-0.01	0.05	-.01		
Parental educational level	-0.03	0.09	-.01			0.09	0.09	.05		
Gender stereotype in SSH	0.40**	0.13	.12**			-0.49***	0.12	-.17***		
Femininity	0.00	0.10	.00			0.23*	0.10	.11*		
Masculinity	-0.22	0.11	-.08			-0.19	0.10	-.09		
Step 3 (Motivational beliefs)				.14	.10***				.19	.08***
Constant	2.98	0.58				-0.70	0.49			
Reading practices	0.17*	0.08	.09*			0.16*	0.07	.10*		
Cultural practices	-0.21*	0.10	-.09*			-0.02	0.09	-.01		
Possession of cultural goods	0.04	0.05	.04			0.04	0.05	.04		
Number of books	0.03	0.05	.03			0.01	0.05	.01		
Parental educational level	0.07	0.09	.04			0.13	0.08	.07		
Gender stereotype in SSH	0.34**	0.13	.10**			-0.47***	0.12	-.16***		
Femininity	-0.16	0.10	-.07			0.11	0.09	.06		
Masculinity	-0.24*	0.10	-.09*			-0.15	0.10	-.07		
Expectancies for success in the Cro. lang.	-0.10	0.09	-.05			0.14	0.09	.08		
Utility value of the Cro. lang.	0.56***	0.07	.35***			0.36***	0.06	.26***		
<b>R<sub>Adj</sub><sup>2</sup></b>					.13					.17

Note. B = unstandardised regression coefficients; S.E. = standard error;  $\beta$  = standardised regression coefficients; R<sup>2</sup> = squared multiple correlation; R<sub>Adj</sub><sup>2</sup> = adjusted squared multiple correlation. \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Stereotypes: 1 = do not accept stereotype, 2 = accept stereotype. SSH = social sciences and humanities.

The chosen predictors explained between 12.9% (for young women's choice of the social sciences and humanities courses) and 24.9% (for young

women's choice of the technical sciences courses) of the total variance of course choices.

Hypothesis 1 that motivational beliefs are the strongest predictors of both course choices was confirmed for both samples: the motivational block explained the most variance compared to other blocks of predictors, while utility value was the strongest predictor in all regression analyses, compared to other predictors. Young men and women who perceived mathematics as useful, and who expected to be successful in mathematics and related careers, were more likely to choose the technical sciences courses. The utility value of the Croatian language predicted the choice of the social sciences and humanities courses, while expectancies of success in the Croatian language did not contribute to that choice.

Hypothesis 2 was also confirmed: young women who endorsed gender stereotypes about occupations in technical sciences were less likely to choose the technical sciences courses, whereas young men who endorsed stereotypes about occupations in social sciences and humanities were less likely to choose the social sciences and humanities courses. Young women who believed that women were more talented for occupations in social sciences and humanities had a stronger intention to choose the social sciences and humanities courses, while no such effect was found for young men's stereotypes and course choices in the technical sciences domain.

As proposed by Hypothesis 3, traditional gender roles predicted weaker intentions to choose gender non-stereotypical courses. More precisely, for young women, high femininity (in the 2<sup>nd</sup> and 3<sup>rd</sup> steps) and low masculinity scores (in the 2<sup>nd</sup> step) predicted their weaker intentions to choose the technical sciences courses; for young men, a low femininity score predicted their weaker intention to choose the social sciences and humanities courses. When inspecting gender stereotypical higher education choices, the results show that young men's higher masculinity score, i.e. adherence to the traditional male gender role, predicted their choice of the technical sciences courses. Femininity was a significant predictor of young men's technical sciences course choice due to the suppression effect of masculinity<sup>7</sup>, while masculinity and cultural practices predicted young women's social sciences

7 Femininity had a statistically non-significant negative zero-order correlation with young men's technical sciences course choice ( $r = -.03, p > .05$ ), whereas its beta coefficient in the regression analysis for the explanation of young men's technical sciences course choice was statistically significant ( $\beta = -.14, p < .01$  in the 2<sup>nd</sup> step;  $\beta = -.12, p < .01$  in the 3<sup>rd</sup> step). This could be due to a significant zero-order correlation between femininity and masculinity ( $r = .45, p > .001$ ). Masculinity was the only predictor variable that, when removed from the regression analysis, resulted in the decrease and statistical non-significance of the beta coefficient for femininity ( $\beta = -.03, p > .05$  in the 2<sup>nd</sup> step;  $\beta = -.04, p > .05$  in the 3<sup>rd</sup> step). This implies that masculinity is a suppressor variable because it enhances the importance of femininity by virtue of suppression of irrelevant variance in them.



and humanities course choice due to the suppression effects of reading practices<sup>8</sup>.

Hypothesis 4 was only partially confirmed since only reading practices contributed to the explanation of the social sciences and humanities courses choice for both samples (in all three steps), and not the other frequently used indicators of cultural capital. No cultural capital indicators contributed to the explanation of young men's intentions to choose the technical sciences courses, whereas reading practices explained young women's intentions to choose the technical sciences courses only in the first step.

## Discussion

This article examined the complex processes that underpin gendered higher education choices. Theoretically, it explored facets of Eccles et al.'s situated expectancy-value theory, especially its gender dimension and the role of sociocultural background. The aim of the study was to examine the role of family educational background, as well as the role of cultural resources and cultural and reading practices, alongside motivational beliefs, gender roles and gender stereotypes, in shaping educational choices.

As hypothesised by situated expectancy-value theory, we found motivation for mathematics and the Croatian language, or, more precisely, the utility value, to be the best predictor of students' course choices in technical sciences and social sciences and humanities, respectively. Additionally, expectancies of success were found to be an important predictor of students' course choices in the technical sciences. These results are in line with the studies from the United States and Croatia that have shown that subjective task values were stronger predictors of educational choices than the expectancies of success (e.g. Jugović, 2017; Lauermann et al., 2015). One of possible

8 Cultural practices had a statistically non-significant negative zero-order correlation with young women's social sciences and humanities course choice ( $r = -.04, p > .05$ ). Its beta coefficients in the regression analysis for the explanation of young women's social sciences and humanities course choice were statistically significant ( $\beta = -.11, p < .05$  in the 1<sup>st</sup> step;  $\beta = -.10, p < .05$  in the 2<sup>nd</sup> step; and  $\beta = -.09, p < .01$  in the 3<sup>rd</sup> step). Similarly, masculinity had a statistically non-significant negative zero-order correlation with young women's social sciences and humanities course choice ( $r = -.06, p > .05$ ), whereas its beta coefficient was statistically significant ( $\beta = -.09, p < .05$  in the 3<sup>rd</sup> step). This could be due to significant zero-order correlation of reading practices with both cultural practices ( $r = .37, p < .001$ ) and masculinity ( $r = .24, p < .001$ ). Reading practices was the only predictor variable that, when removed from the regression analysis, resulted in the decrease and statistical non-significance of the beta coefficient for cultural practices ( $\beta = -.08, p > .05$  in the 1<sup>st</sup> step;  $\beta = -.06, p > .05$  in the 2<sup>nd</sup> step;  $\beta = -.08, p > .05$  in the 3<sup>rd</sup> step) and masculinity ( $\beta = -.06, p > .05$  in the 2<sup>nd</sup> step;  $\beta = -.08, p > .05$  in the 3<sup>rd</sup> step). This implies that reading practices is a suppressor variable because it enhances the importance of cultural practices and masculinity by virtue of suppression of irrelevant variance in them.

reasons explaining why expectancies of success in the Croatian language are not significant for explaining the choice of social sciences and humanities courses might be that students assumed that being successful in the Croatian language was important for some social sciences and humanities courses (e.g. languages), but not for all social sciences and humanities courses (e.g. psychology, sociology, history, economics). On the other hand, given that mathematics is a part of every technical sciences course curriculum, students were aware that it was important to be successful in mathematics in the future if they chose that career path.

Endorsing gender stereotypes about a lesser talent of one's own gender in an occupational sense predicted weaker intentions to choose a course in a given domain, which is also hypothesised by situated expectancy-value theory. These results are in line with the findings of numerous studies, including the ones from China, Croatia and the United States, on the adverse effects of negative stereotypes on adolescents' educational and career choices, but also on their academic achievement, motivational beliefs, (science) identity or sense of belonging (e.g. Jugović, 2010b, 2017; Jugović et al., 2012; Master et al., 2016; Song et al., 2017; Star et al., 2023; Starr & Simpkins, 2021).

Our results that point to the negative effect of traditional gender roles on gender non-stereotypical course choices are in line with the situated expectancy-value theory hypothesis that the likelihood of choosing a specific educational domain decreases when there is a conflict between pupils' gender roles and their perception of the educational domain as either masculine or feminine (Eccles et al., 1983). In addition, these findings could also be explained by gender identity theory (Vantieghemet et al., 2013) and 'doing gender' theory (West & Zimmerman, 1987). Young women could be affirming their femininity by not choosing the technical science courses, whereas young men could be affirming their gender identity by choosing the technical sciences courses and avoiding the social sciences and humanities courses.

A contribution of this study is that it has examined the way in which family educational background, ownership of books and students' reading and cultural practices might shape their educational choices within situated expectancy-value theory. There are two main findings related to the addition of these indicators of cultural capital into the model. First, the usual indicators of cultural capital, such as parental educational level, cultural practices and ownership of books and cultural goods, which had predicted educational outcomes such as preference of liberal arts as a college major, science literacy or grades in mathematics in China, Croatia and Denmark (Baranović et al., 2014; Hu & Wu, 2019; Thomsen, 2012; Puzić et al., 2018), were not found to be significant for explaining the choices of the social sciences and humanities and technical sciences courses in our study. This might be due to broadness of these fields of study; therefore, future research might consider examining

common indicators of cultural capital in relation to specific university courses, and, in particular, differentiating between the courses which carry different prestige. We would hypothesise that the more common indicators of cultural capital could play an important role in choosing more prestigious courses for both men and women. Another possible explanation lies in the complexity of our regression analyses, which included numerous intercorrelated variables, thereby reducing the likelihood of each variable emerging as a statistically significant predictor. Indeed, other studies either: (1) used composite measures of objectified or embodied cultural capital (e.g. Hu & Wu, 2019), whereas we used two indicators for each of these forms of cultural capital, and, additionally, parental educational level as an indicator of institutionalised cultural capital, or (2) did not explore the role of motivational beliefs, gender stereotypes or gender roles in addition to cultural capital (e.g. Baranović et al., 2012; Puzić et al., 2018), as we did.

Secondly, reading practices as an indicator of cultural capital in this study did increase the explanatory potential of the regression model for the choice of the social sciences and humanities courses. Contrary to available research on the gender gap in reading practices and literacy (e.g. OECD, 2015; Thums et al., 2021), in our study young men and young women did not differ in their reading practices, and reading practices contributed to both young women's and young men's social sciences and humanities course choice. Future research could explore what would be the equivalent of reading practices for the choice of the technical sciences courses. Certain digital skills, as an indicator of cultural capital in a broader sense, might be a promising venue to start with.

Finally, we would like to point out that many indicators of cultural capital were correlated with the variables from situated expectancy-value theory in a meaningful way. Where statistically significant, cultural capital indicators were related to higher motivation for mathematics and the Croatian language, as well as lower acceptance of gender stereotypes. It was also interesting to notice that most cultural capital indicators were positively associated with young men's expression of femininity and young women's expression of masculinity. We see the potential in further exploration of the role of cultural capital indicators, preferably in studies with fewer variables, a greater focus on specific topics (e.g. the links between students' cultural capital and motivation) and more complex analyses (e.g. exploring mediations or the moderator role).

### *Study limitations and future directions*

One of the study limitations is the correlational nature of the data, which does not allow for causal conclusions, and prevents inferences about temporal precedence. Further studies should use longitudinal designs to test the effects of motivation, gender roles, stereotypes and cultural capital on subsequent

educational choices. Our study employed hierarchical regression analysis, but future research should consider more advanced techniques, such as structural equation modelling, to explore potential mediation effects in the relationship between gender and educational intentions, e.g., the mediation role of gender stereotypes, gender roles or motivational beliefs. Another limitation of our study is the exclusion of one of the subjective task values in situated expectancy-value theory – namely, the concept of cost. This aspect of motivation has received less attention in the studies based in situated expectancy-value theory compared to other subjective values, but Eccles and Wigfield (2020, 2024) have recently emphasised its importance, proposing its inclusion in future studies. As Flake et al. (2015) have noted, it should no longer be regarded as the “forgotten” component of the theory. As criterion variables in the model, we used the measures of educational intentions and not the actual enrolment into university courses. Although educational intentions provide information on the direction of future educational paths, a more precise measure of the actual educational choice would be more suitable in future research. Finally, our study leans on a dominant, quantitative approach to operationalising cultural capital. Future studies might consider cultural capital in terms of academic skills, as well as its more “subjective” aspects frequently captured in qualitative research.

## Conclusion

This study on gendered higher education choices has contributed to the existing literature in several ways. Firstly, it has added to different examinations of Eccles et al.’s situated expectancy-value theory, especially its sociocultural aspect, by considering certain indicators of cultural capital as expressions of young people’s socioeconomic background. Furthermore, it has highlighted the importance of gender stereotypes, but also the frequently neglected concept of gender roles in the explanation of gendered educational choices. Finally, educational choices in both typically male and typically female domains have been explored, unlike in other numerous studies that have usually explored the choice of STEM as a typically male domain.

As a final conclusion, we would like to situate our findings in relation to current educational policies. Our results show that gender stereotypes, as well as stereotypical gender roles, are pervasive among youth in contemporary Croatia. The gender dimension of course choices therefore inevitably needs to be unpacked and engaged with by policy makers and others engaged in the educational system. Importantly, ‘light’ policy measures at school-level, such as encouraging young women through gender-sensitive career advice to study courses in STEM areas (see e.g. Caprile et al., 2015) and young men to study social sciences and humanities, seems insufficient in the context of

our data. More radical educational policies and intervention programmes aimed at deconstructing the traditional ideas of masculinity and femininity, challenging students' stereotypes about educational domains and occupations and raising students' awareness of the negative influence of stereotypes on educational choices are required.

## References

- Albert, F., David, B., Kmetty, Z., Kristof, L., Robert, P., & Szabo, A. (2018). Mapping the post-communist class structure. Findings from a new multidimensional Hungarian class survey. *East European Politics and Societies and Cultures*, 32(3), 544–565. <https://doi.org/10.1177/0888325417739954>
- Baranović, B. (Ed.) (2015). *Koji srednjoškolski namjeravaju studirati? – Pristup visokom obrazovanju i odabir studija* [Which high school students intend to study? – Access to higher education and choice of study]. Institute for Social Research in Zagreb.
- Baranović, B., Jugović, I., & Puzić, S. (2014). Važnost obiteljskog podrijetla i uspjeh iz matematike i odabir srednje škole [The importance of family background and gender for mathematics achievement and secondary school choice]. *Revija za socijalnu politiku*, 21(3), 285–307. <https://doi.org/10.3935/rsp.v21i3.1174>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. Freeman.
- Boiché, J. C. S., Guillet, E., Bois, J. E., & Sarrazin, P. G. (2011). Antecedents, accuracy and consequences of parents' behaviours. A cross sectional study based on Eccles expectancy value model. *International Journal of Sport Psychology*, 42(4), 368–389.
- Bourdieu, P. (1973). Cultural reproduction and social reproduction. In R. Brown (Ed.) (1979), *Knowledge, education and cultural change* (pp. 56–68). Tavistock.
- Bourdieu, P. (1984). *Distinction: A Social Critique of the Judgement of Taste*. Routledge.
- Bourdieu, P. (1986). The forms of capital. In A. H. Halsey, H. Lauder, P. Brown, & A. Stuart Wells (Eds.) (1997), *Education, culture, economy and society* (pp. 241–258). Oxford University Press.
- Bourdieu, P., & Passeron, J. C. (1977). *Reproduction in education, society and culture*. Sage.
- Caprile, M., Palmén, R., Sanz, P., & Dente, G. (2015). *Encouraging STEM studies. Labour market situation and comparison of practices targeted at young people in different member states*. European Parliament. [http://www.europarl.europa.eu/RegData/etudes/STUD/2015/542199/IPOL\\_STU%282015%29542199\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2015/542199/IPOL_STU%282015%29542199_EN.pdf).
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155–159. <https://doi.org/10.1037//0033-2909.112.1.155>
- Council of Europe (2018-2023). *Council of Europe Gender Equality Strategy 2018-2023*. <https://www.coe.int/en/web/genderequality/gender-equality-strategy>
- Croatian Bureau of Statistics (2023). *Women and men in Croatia, 2023*. Croatian Bureau of Statistics. [https://podaci.dzs.hr/media/cr5nm1o5/women\\_and\\_man\\_2023.pdf](https://podaci.dzs.hr/media/cr5nm1o5/women_and_man_2023.pdf).
- DeBacker, T. K., & Nelson, R. M. (1999). Variations on an expectancy-value model of motivation in science. *Contemporary Educational Psychology*, 24, 71–94. <https://doi.org/10.1080/00220670009598713>

- De Graaf, N. D., De Graaf, P. M., & Kraaykamp, G. (2000). Parental cultural capital and educational attainment in the Netherlands: A refinement of the cultural capital perspective. *Sociology of Education*, 73, 92–111. <https://doi.org/10.2307/2673239>
- Dillabough, J.-A. (2004). Class, culture and the 'predicaments of masculine domination': Encountering Pierre Bourdieu. *British Journal of Sociology of Education*, 25(4), 489–506. <https://doi.org/10.1080/0142569042000236970>
- DiMaggio, P. (1982). Cultural capital and school success: The impact of status culture participation on the grades of U.S. high school students. *American Sociological Review*, 47(2), 189–201. <https://doi.org/10.2307/2094962>
- Eccles, J. S. (1987). Gender roles and women's achievement-related decisions. *Psychology of Women Quarterly*, 11, 135–172. <https://doi.org/10.1111/j.1471-6402.1987.tb00781.x>
- Eccles, J. (2009). Who am I and what am I going to do with my life? Personal and collective identities as motivators of action. *Educational Psychologist*, 44(2), 78–89. <https://doi.org/10.1080/00461520902832368>
- Eccles, J. S., Adler, T. F., Futterman, R., Goff, S. B., Kaczala, C. M., Meece, J. L., & Midgley, C. (1983). Expectancies, values and academic behaviors. In J. T. Spence (Ed.), *Achievement and achievement motives* (pp. 78–146). W. H. Freeman.
- Eccles, J. S., & Wigfield, A. (1995). In the mind of the actor: The structure of adolescents' achievement task values and expectancy-related beliefs. *Personality and Social Psychology Bulletin*, 21(3), 215–225. <https://doi.org/10.1177/0146167295213003>
- Eccles, J. S. & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology*, 53, 109–132. <https://doi.org/10.1146/annurev.psych.53.100901.135153>
- Eccles, J. S., & Wigfield, A. (2020). From expectancy-value theory to situated expectancy-value theory: A developmental, social cognitive, and sociocultural perspective on motivation. *Contemporary Educational Psychology*, 61(4), 101859. <https://doi.org/10.1016/j.cedpsych.2020.101859>
- Eccles, J. S., & Wigfield, A. (2024). The development, testing, and refinement of Eccles, Wigfield, and colleagues' situated expectancy-value model of achievement performance and choice. *Educational Psychology Review*, 36(2), Article 51. <https://doi.org/10.1007/s10648-024-09888-9>
- Eurostat (2024). *Students Enrolled in Tertiary Education by Education Level, Programme Orientation, Sex and Field of Education* (educ\_uae\_enrt03) [database]. Luxembourg: statistical office of the European Union. [https://ec.europa.eu/eurostat/databrowser/product/page/educ\\_uae\\_enrt03](https://ec.europa.eu/eurostat/databrowser/product/page/educ_uae_enrt03).
- Evans, S. (2009). In a different place: Working-class girls and higher education. *Sociology*, 43(2), 340–355. <https://doi.org/10.1177/00380385081011>
- Flake, J. K., Barron, K. E., Hulleman, C., McCoach, D. B., & Welsh, M. E. (2015). Measuring cost: The forgotten component of expectancy-value theory. *Contemporary Educational Psychology*, 41, 232–244. <https://doi.org/10.1016/j.cedpsych.2015.03.002>
- Flemmen, M. (2012). The structure of the upper class: A social space approach. *Sociology*, 46(6), 1039–1058. <https://doi.org/10.1177/0038038512437899>

- Fong, C., J., Kremer, K. P., Hill-Troglin Cox, C., & Lawson, C. A. (2021). Expectancy-value profiles in math and science: A person-centered approach to cross-domain motivation with academic and STEM-related outcomes. *Contemporary Educational Psychology*, 65, 101962. <https://doi.org/10.1016/j.cedpsych.2021.101962>
- Ganzeboom, H. B. C., De Graaf, P. M., & Robert, P. (1990). Cultural reproduction theory on socialist ground: Intergenerational transmission of inequalities in Hungary. *Research in Social Stratification and Mobility*, 9, 79–104. <https://doi.org/10.1556/RevSoc.9.2003.1.1>
- Greene, B. A., DeBacker, T. K., Ravindran, B., & Krows, A. J. (1999). Goals, values, and beliefs as predictors of achievement and effort in high school mathematics classes. *Sex Roles*, 40(5/6), 421–458. <https://doi.org/10.1023/A:1018871610174>
- Guillet, E., Sarrazin, P., Fontayne, P., & Brustad, R. J. (2006). Understanding female sport attrition in a stereotypical male sport within the framework of Eccles's expectancy-value model. *Psychology of Women Quarterly*, 30, 358–368. <https://doi.org/10.1111/j.1471-6402.2006.00311.x>
- Harackiewicz, J. M., Canning, E. A., Tibbetts, Y., & Priniski, S. J., & Hyde, J. S. (2016). Closing achievement gaps with a utility-value intervention: Disentangling race and social class. *Journal of Personality and Social Psychology*, 111(5), 745–765. <https://doi.org/10.1037/pspp0000075>
- Hardie, J. H. (2015). Women's work? Predictors of young men's aspirations for entering traditionally female-dominated occupations. *Sex Roles*, 72, 349–362. <https://doi.org/10.1007/s11199-015-0449-1>
- Hu, A., & Wu, X. (2019). Science or liberal arts? Cultural capital and college major choice in China. *British Journal of Sociology*, 70(1), 190–213. <https://doi.org/10.1111/1468-4446.12342>
- Jugović, I. (2010a). *The importance of gender roles and stereotypes in the explanation of academic achievement and vocational choices*. [Unpublished doctoral dissertation]. Faculty of Humanities and Social Sciences, University of Zagreb, Zagreb.
- Jugović, I. (2010b). The role of motivation and gender stereotypes in explanation of the intention of a study choice in stereotypically male domain. *Sociologija i prostor*, 186(1), 77–98. <https://hrcak.srce.hr/55439>
- Jugović, I. (2010c). What is measured under the concept of gender roles? The review and evaluation of gender role scales and attitudes toward gender roles scales. *Suvremena psihologija*, 13(1), 113–135. <https://hrcak.srce.hr/83030>
- Jugović, I. (2017). Students' gender-related choices and achievement in physics. *Center for Educational Policy Studies Journal*, 7(2), 71–95. <https://doi.org/10.26529/cepsj.170>
- Jugović, I., Baranović, B. i Marušić, I. (2012). The role of gender stereotypes and motivation in the explanation of mathematics achievement and anxiety. *Suvremena psihologija*, 15(1), 65–79. <https://hrcak.srce.hr/index.php/84661>
- Jugović, I. & Kamenov, Ž. (2008). The development of an instrument for measuring gender roles in adolescence. *Suvremena psihologija*, 11(1), 93–106. <https://hrcak.srce.hr/81401>
- Krolo, K., Marčelić, S., & Tonković, Ž. (2016). Roditeljski kulturni kapital kao odrednica kulturnih preferencija mladih. *Društvena istraživanja*, 25(3), 329–351. <https://doi.org/10.5559/di.25.3.03>

- Lareau, A., & Weininger, E. B. (2003). Cultural capital in educational research: A critical assessment. *Theory and Society*, 32(5-6), 567–606. <https://doi.org/10.1023/B:RYSO.0000004951.04408.b0>
- Lauermann, F., Chow, A., & Eccles, J. S. (2015). Differential effects of adolescents' expectancy and value beliefs about math and English on math/science-related and human services-related career plans. *International Journal of Gender, Science and Technology*, 7(2), 205–228. <https://genderandset.open.ac.uk/index.php/genderandset/article/view/393>
- Lauermann, F., Tsai, Y.-M., & Eccles, J. S. (2017). Math-related career aspirations and choices within Eccles et al.'s expectancy–value theory of achievement-related behaviors. *Developmental Psychology*, 53(8), 1540–1559. <https://doi.org/10.1037/dev0000367>
- Lovell, T. (2000). Thinking feminism with and against Bourdieu. In B. Fowler (Ed.), *Reading Bourdieu on Society and Culture* (pp. 27–48). Blackwell.
- Master, A., Cheryan, S., & Meltzoff, A. N. (2016). Computing whether she belongs: Stereotypes undermine girls' interest and sense of belonging in computer science. *Journal of Educational Psychology*, 108, 424–437. <https://doi.org/10.1037/edu0000061>
- Matthews, J. S., & Wigfield, A. (2024). Past due! Racializing aspects of situated expectancy-value theory through the lens of critical race theory. *Motivation Science*, 10(3), 182–196. <https://doi.org/10.1037/mot0000337>
- MRC CBU (2018). *Rules of thumb on magnitudes of effect sizes*. MRC Cognition and Brain Sciences Unit, University of Cambridge. <http://imaging.mrc-cbu.cam.ac.uk/statwiki/FAQ/effectSize>.
- OECD (2015). *The ABC of Gender Equality in Education: Aptitude, Behaviour, Confidence*. PISA, OECD Publishing. <http://dx.doi.org/10.1787/9789264229945-en>.
- Parker, P. D., Schoon, I., Tsai, Y. M., Nagy, G., Trautwein, U., & Eccles, J. S. (2012). Achievement, agency, gender, and socioeconomic background as predictors of postschool choices: A multicontext study. *Developmental Psychology*, 48(6), 1629–1642. <https://doi.org/10.1037/a0029167>
- Parker, P. D., Van Zanden, B., Marsh, H. W., Owen, K., Duineveld, J. J., & Noetel, M. (2020). The intersection of gender, social class, and cultural context: a meta-analysis. *Educational Psychology Review*, 32, 197–228. <https://doi.org/10.1007/s10648-019-09493-1>
- Puzić, S., Gregurović, M., & Košutić, I. (2018). Kulturni kapital i obrazovne nejednakosti u Hrvatskoj, Njemačkoj i Danskoj: usporedna analiza PISA 2009 podataka [Cultural Capital and Educational Inequality in Croatia, Germany and Denmark: A Comparative Analysis of the PISA 2009 Data]. *Revija za socijalnu politiku*, 25(2), 133–156. <https://doi.org/10.3935/rsp.v25i2.1463>
- Reay, D. (1998). Cultural reproduction: Mother's involvement in their children's primary schooling. In M. Grenfell, & D. James (Eds.), *Bourdieu and education: Acts of Practical theory* (pp. 55–71). Falmer Press. <https://doi.org/10.1177/136548020200500306>
- Reay, D. (2004). Education and cultural capital: The implications of changing trends in education policies. *Cultural Trends*, 13(2), 73–86. <https://doi.org/10.1080/0954896042000267161>



- Song, J., Zuo, B., Wen, F., & Yan, L. (2017). Math-gender stereotypes and career intentions: an application of expectancy-value theory. *British Journal of Guidance & Counselling*, 45(3), 328–340. <https://doi.org/10.1080/03069885.2017.1283680>
- Simon, R. M., Wagner, A., & Killion, B. (2016). Gender and choosing a STEM major in college: femininity, masculinity, chilly climate, and occupational values. *Journal of Research in Science Teaching*, 54(3), 1-25. <https://doi.org/10.1002/tea.21345>
- Starr, C. R., Gao, Y., Rubach, C., Lee, G., Safavian, N., Dicke, A.-L., Eccles, J. S., & Simpkins, S. D. (2023). “Who’s better at math, boys or girls?”: Changes in adolescents’ math gender stereotypes and their motivational beliefs from early to late adolescence. *Education Sciences*, 13(9), 866. <https://doi.org/10.3390/educsci13090866>
- Starr, C. R., & Simpkins, S. D. (2021). High school students’ math and science gender stereotypes: relations with their STEM outcomes and socializers’ stereotypes. *Social Psychology of Education*, 24, 273–298. <https://doi.org/10.1007/s11218-021-09611-4>
- Thomsen, J. P. (2012). Exploring the heterogeneity of class in higher education: social and cultural differentiation in Danish university programmes. *British Journal of Sociology of Education*, 33(4), 565–585. <https://doi.org/10.1080/01425692.2012.659458>
- Thums, K., Artelt, C., & Wolter, I. (2021). Reading for entertainment or information reception? Gender differences in reading preferences and their impact on text-type-specific reading competences in adult readers. *European Journal of Psychology of Education*, 36, 339–357. <https://doi.org/10.1007/s10212-020-00486-1>
- Tonks, S. M., Wigfield, A., & Eccles, J. S. (2018). Expectancy value theory in cross-cultural perspective: What have we learned in the last 15 years? In G. A. D. Liem, & D. McInerney (Eds.), *Recent advances in sociocultural influences on motivation and learning: Big theories revisited* (2nd Ed, pp. 91-116). Information Age Publishers.
- Vantieghem, W., Vermeersch, H., & Van Hoult, M. (2013). Why “gender” disappeared from the gender gap: (re-)introducing gender identity theory to educational gender gap research. *Social Psychology of Education*, 17, 357–381. <https://doi.org/10.1007/s11218-014-9248-8>
- Verdugo-Castro, S., García-Holgado, A., & Sánchez-Gómez, M. C. (2022). The gender gap in higher STEM studies: A systematic literature review. *Heliyon*, 8(8), e10300. <https://doi.org/10.1016/j.heliyon.2022.e10300>
- Wegemer, C. M. & Eccles, J. S. (2019). Gendered STEM career choices: Altruistic values, beliefs, and identity. *Journal of Vocational Behavior*, 110, 28-42. <https://doi.org/10.1016/j.jvb.2018.10.020>
- West, C., & Zimmerman, D. H. (1987). Doing gender. *Gender & Society*, 1(2), 125-151. <https://doi.org/10.1177/0891243287001002002>
- Wigfield, A., & Gladstone, J. (2019). How students’ expectancies and values relate to their achievement in times of global change and uncertainty. In E. N. Gonida & M. Lemos (Eds.), *Motivation in education at a time of global change: Theory, research, and implications for practice* (pp. 15-32). Emerald. <https://doi.org/10.1108/S0749-742320190000020002>

## Istraživanje teorije situiranih očekivanja i vrednosti: studija rodno zasnovanih odabira visokog obrazovanja

**Ivana Pikić Jugović** 

*Institut za društvena istraživanja u Zagrebu, Centar za istraživanje i razvoj obrazovanja, Zagreb, Hrvatska*

**Karin Doolan** 

*Odel za sociologiju, Univerzitet u Zadru, Hrvatska*

**Branislava Baranović** 

*Institut za društvena istraživanja u Zagrebu, Centar za istraživanje i razvoj obrazovanja, Zagreb, Hrvatska*

U članku se ispituje kako motivaciona uverenja, rodne uloge i stereotipi, kao i kulturni resursi i prakse oblikuju učeničke odabire univerzitetskih kurseva u tehničkim, te društvenim i humanističkim naukama. Njegova teorijska okosnica je teorija situiranih očekivanja i vrednosti Eccles i saradnika, sa naglaskom na važnost njene rodne dimenzije, kao i socio-kulturne pozadine izražene kroz indikatore kulturnog kapitala. Podaci iz upitnika prikupljeni su od 1301 srednjoškolca u Hrvatskoj. Rezultati pokazuju da su motivaciona uverenja, posebno utilitarna vrednost, bili najjači prediktori izbora studija i za devojke i za mladiće. Tradicionalne rodne uloge predviđale su slabije namere da se izaberu rodno nestereotipni kursevi. Podržavanje rodnih stereotipa o manjem talentu sopstvenog roda za zanimanja u tehničkim ili društvenim i humanističkim naukama predviđalo je slabije namere da se izaberu kursevi u tim oblastima studija. Konačno, čitalačke prakse, kao pokazatelj kulturnog kapitala, dodatno su objasnile odabir kurseva društvenih i humanističkih nauka za devojke i mladiće. Implikacija istraživanja je potreba za kreiranjem intervencijskih programa čiji je cilj dekonstrukcija rodnih uloga i propitivanje učeničkih stereotipa o obrazovnim domenima i zanimanjima.

**Ključne reči:** teorija situiranih očekivanja i vrednosti, obrazovni odabiri, rod, motivacija, učenici srednjih škola