

**Influence of Demographic Characteristics on The Level of Career Self Efficacy Beliefs
Among Secondary School Students in Uasin Gishu County, Kenya**

By

¹ Susan Serem , ² Professor Simeon K. Ngigi and ³ Sr. Professor Elizabeth Nduku

¹ Susan Serem, Postgraduate Student, The Catholic University of Eastern Africa

Corresponding author email address: susanserem@gmail.com

² Professor Simeon K. Ngigi, Faculty of education, The Catholic University of Eastern Africa

³ Sr. Professor Elizabeth Nduku, Faculty of Education, The Catholic University of Eastern Africa

Abstract

Career development is a lifetime process that entails decision making that is linked to an individual's general experience. This study examined the influence of demographic characteristics on secondary school students' extent of self-efficacy beliefs in Uasin Gishu County, Kenya. The objective was to explore the patterns inherent in the levels of self-efficacy beliefs in cognizance of the diverse student population. The SCCT choice model advances the assumption that several cognitive-person variables (e.g., self-efficacy, outcome expectations, and goals) interact with other aspects of the person and their environment (e.g., gender, ethnicity, social supports, and barriers) to help shape the course of career development. In the study, it is theorized that self-efficacy beliefs and gender (personal attributes) interact with the type and category of school (supportive environment) to shape the course of career development by modifying self-efficacy beliefs. Descriptive statistics were conducted on data obtained from 15 secondary schools in a survey of 658 students (N = 14,250) selected through the optimum allocation technique of stratified sampling. The findings established a statistically significant relationship between the self-efficacy beliefs and demographic characteristics: accurate self-appraisal (gender χ^2 (3, N = 658) = 10.17, p = .017; type of school χ^2 (6, N = 658) = 69.51, p = .000; school category χ^2 (9, N = 658) = 485.72, p = .000). In addition, gathering occupational information, (type of school χ^2 (6, N = 658) = 63.73, p = .000 and category of school χ^2 (9, N = 658) = 366.71, p = .000). The findings suggest that students' levels of self-efficacy beliefs vary depending on their gender, type, and category of school in accurate self-appraisal, goal selection and planning for the future. However, gathering occupational information (χ^2 (3, N = 658) = 6.76, p = .080) and problem-solving efficacy (χ^2 (3, N = 658) = 2.98, p = .395) are independent of gender. Students of the National and extra county school categories demonstrated highly efficacious beliefs across the five career competencies. Those in county and sub-county showed the least efficacious beliefs across the competencies. Additionally, Girls-only schools showed high efficacy levels compared to boys-only and mixed-secondary schools. These findings advance empirical insights on the association between levels of self-efficacy beliefs and demographic characteristics. For policymakers in education, the association calls for targeted career interventions to address disparities across the types and categories of schools.

Key words: Kenya, Uasin Gishu, Demographic Characteristics, Level of Career Self Efficacy Beliefs, Accurate self-appraisal, Goal selection, Planning for the future

**Influence of Demographic Characteristics on The Level of Career Self Efficacy Beliefs
Among Secondary School Students in Uasin Gishu County, Kenya**

By

¹ Susan Serem , ² Professor Simeon K. Ngigi and ³ Sr. Professor Elizabeth Nduku

Background to the Study

Career development is a lifetime process that entails decision making that is linked to an individual's general experience (Ajayi, Moosa, & Aloka, 2023). Rahmati (2015) contends that students' career aspirations are a byproduct of many factors with their self-efficacy beliefs being the most important variable. It determines what goals one chooses to pursue, how to accomplish them, and how to reflect upon one's performance (Cherry, 2020). Yilmaz (2017) observes that when individuals explore their personal characteristics and career options in detail, they can decisively settle on a career that matches their needs and creates opportunities to support their personal development. At the end of the four years of secondary school education, students do career sifting. They list potential courses based on priority. Priority is based on the self-efficacy beliefs of the individual in the occupations listed and the potential benefit of the occupation (Niles & Harris-Bowlsbey, 2013). In Kenya, students enrol in primary schools preferred by their parents. However, when they sit for the Kenya Certificate of Primary Education, their academic performance is used as a measure of eligibility to a specific category of school. Enrolment into these hierarchical strata, classified as National, extra county, county, and sub-county, is determined by academic performance. The national and extra-county schools enlist students with higher academic ability than county and subcounty schools. Other than the school culture and personal experiences, learning in these categories is affected by cognitive capabilities. These hierarchies are further clustered as Boys' only, Girls' only, and Mixed. Mixed schools are governed by principals of either gender. Boys only are headed by a male, and Girls only a female. Learning in these types of schools is influenced by the school culture and personal experience. The type and category of schools and gender (male, female) formed the independent variable whereas the level of self-efficacy beliefs based on career competencies the dependent variable.

Statement of the Problem

In Kenya, students drawn from the different types and categories of schools undertake a similar career-sifting process. They identify four preferred courses to pursue at the university and list them in order of priority. Subsequently, they apply to the Kenya University and Colleges Central Placement Services for consideration. The process occurs after students have gone through career interventions aimed at addressing indecision. However, many experience indecision as they make placement applications. Others overestimate their cognitive abilities, making unrealistic applications. Cognisant of the diverse student population, this study examined the influences of demographic characteristics on students' self-efficacy beliefs to understand the patterns inherent in the levels of self-efficacy beliefs.

Citation: Serem, S; Ngigi, S. K & Nduku, E. (2024). Influence of Demographic Characteristics on The Level of Career Self Efficacy Beliefs Among Secondary School Students in Uasin Gishu County, Kenya. *Journal of Popular Education in Africa*. 8(10), 17 – 38.

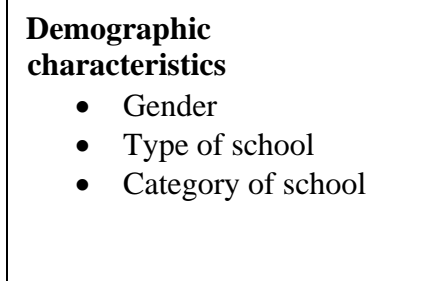
Theoretical Framework

In the study, it is theorized that self-efficacy beliefs and gender (personal attributes) interact with the type and category of school (supportive environment) to shape the course of career development by modifying self-efficacy beliefs. Social Cognitive Career Theory (SCCT) is a set of theoretical propositions that attempts to explain important aspects of human development and behavior that can be empirically validated as well as the application of these understandings to developing practices that seek to modify these aspects of behavior (Lent, 2017). The theory is a variant of Albert Bandura's social cognitive career theory which Lent et al. (1994, 2002) developed to explain and predict career behavior. The choice model advances the assumption that several cognitive-person variables (e.g., self-efficacy, outcome expectations, and goals) interact with other aspects of the person and their environment (e.g., gender, ethnicity, social supports, and barriers) to help shape the course of career development (Lent, 2002; Lent, 2013). Unlike global confidence or self-esteem, self-efficacy beliefs are relatively dynamic and are specific to particular activity domains. People vary in their self-efficacy regarding the behaviors required in different occupational domains. SCCT assumes that people are likely to become interested in, choose to pursue, and perform better at activities at which they have strong self-efficacy beliefs, as long as they also have necessary skills and environmental supports to pursue these activities (Lent et al., 2002). Despite the systematic framework for understanding the relationship between variables (Savickas, 2019), SCCT fails to provide assessment tools for evaluating levels of self-efficacy beliefs reflective of diverse contexts. In assessing the nexus between demographic characteristics and levels of self-efficacy beliefs, This study also sought to provide empirical validation for SCCT driven assessment tool for levels of career specific self-efficacy beliefs

Citation: Serem, S; Ngigi, S. K & Nduku, E. (2024). Influence of Demographic Characteristics on The Level of Career Self Efficacy Beliefs Among Secondary School Students in Uasin Gishu County, Kenya. *Journal of Popular Education in Africa*. 8(10), 17 – 38.

Conceptual Framework

Independent Variable



Dependent Variable

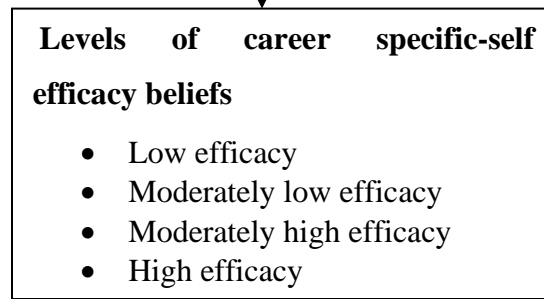
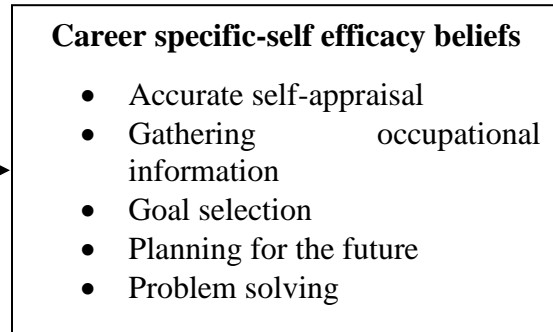


Figure 1: Conceptual Framework of the Variables

Source: Researchers (2022)

Review of Empirical Literature

The SCCT choice model advances the assumption that several cognitive-person variables (e.g., self-efficacy, outcome expectations, and goals) interact with other aspects of the person and their environment (e.g., gender, ethnicity, social supports, and barriers) to help shape the course of career development (Lent, 2002). Despite the systematic framework for understanding the relationship between variables (Savickas, 2019), SCCT fails to provide assessment tools for evaluating levels of self efficacy beliefs reflective of diverse contexts. In the study, it is theorized that self-efficacy beliefs and gender (personal attributes) interact with the type and category of school (supportive environment) to shape the course of career development by modifying self-efficacy beliefs. Research on learning experiences, from which self-efficacy beliefs are assumed to derive, has found that performance mastery typically shows the strongest relations with self-efficacy in corresponding activity domains. The other (vicarious, persuasion, emotional) sources have also been found to relate to self-efficacy, although typically to a more modest degree than personal accomplishments (Lent, 2008). The most powerful of which is mastery experience. After students complete an academic task, they interpret and evaluate the results obtained. Judgments of competence are created or revised according to those interpretations. When they believe that their efforts have been successful, their confidence to accomplish similar or related tasks is raised; when they know that their efforts failed to produce the effect desired, their confidence to succeed in similar endeavors is diminished. In addition to interpreting the results

Citation: Serem, S; Ngigi, S. K & Nduku, E. (2024). Influence of Demographic Characteristics on The Level of Career Self Efficacy Beliefs Among Secondary School Students in Uasin Gishu County, Kenya. *Journal of Popular Education in Africa*. 8(10), 17 – 38.

of their actions, students build their efficacy beliefs through the vicarious experience of observing others. The information gained from others perceived to be similar in ability yields the most influential comparative information. The experiences of those perceived as having similar attributes (e.g., age, gender, ethnicity, etc.) are often powerful sources of self-efficacy information (Usher & Pajares, 2008).

Wu et al. (2020) examined the correlations between personality and career decision-making self-efficacy (CDMSE) of university students from poor rural areas in China from an educational equity perspective. A sample of 202 participants studying at the College of Vocational and Technical Education of South China Normal University was selected. The results showed that a gender difference in accurate self-appraisal and a difference by year of study in gathering information. Mwaura et al. (2019) investigated the relationship between academic self-efficacy as a determinant of career aspiration and academic performance among students in public secondary schools in Nairobi County, Kenya. Many students with high levels of academic self-efficacy had an average C- grade (Mean = 5.05, SD = 2.53) in the 2017 KCSE National examination. Those respondents with low academic self-efficacy had an average D grade (M = 3.7, Sd = 2.44). Therefore, students with high academic self-efficacy have higher chances of achieving academic success than those with low academic self-efficacy.

Research Methodology

The students' questionnaire items were on a Likert scale. According to Jackson (2009), they are easy to analyze. Section A had items aimed at gathering demographic information of the respondents. They included the gender (male, female), type of school (Girls only, Boys only, or Mixed school), and the category of the school (national, extra county, county, and sub-county). The Self-Efficacy scale ($\geq .7$) was used to collect data from 658 secondary school students of Uasin Gishu County. The optimum allocation technique of stratified sampling was used in deriving the study sample. The demographic information, categorical data, was coded according to attributes in each category and assigned values as follows: gender: Male (0), Female (1); type of schools: Girls only (0), Boys only (1), Mixed school (2); category of schools: National (3), Extra - county (2), County (1) and Sub-County (0) educational attainment. Descriptive statistics condensed the data which was presented in tables. The Self-efficacy Scale items on levels of self-efficacy beliefs were entered into SPSS and a Chi-square test was run to examine the nature of the relationship between demographic characteristics and level of self-efficacy beliefs. The Chi-square statistic was used to ascertain if the variables were independent.

Findings

Table 1-15 captures the distribution of career-specific self-efficacy beliefs on the five sub-variables (accurate self-appraisal, gathering occupational information, goal selection, planning for the future, and problem-solving) based on students' demographic characteristics.

Representation of Accurate Self Appraisal

Table 1 captures the representation of accurate self-appraisal sub-variable based on the type of school, gender, and category of school.

Citation: Serem, S; Ngigi, S. K & Nduku, E. (2024). Influence of Demographic Characteristics on The Level of Career Self Efficacy Beliefs Among Secondary School Students in Uasin Gishu County, Kenya. *Journal of Popular Education in Africa*. 8(10), 17 – 38.

Table1: Distribution of Accurate Self Appraisal Based on Type of School

Accurate self – appraisal	Type of school			Total (F/ %)
	Boys Only (F / %)	Girls Only (F/ %)	Mixed (F/ %)	
Not at all true	1(7.7%)	0(0.0%)	12(92.3%)	13(2.0%)
Hardly True	67(27.3%)	72(33.4%)	90(39.3%)	229(34.8%)
Moderately True	50(23.3%)	47 (22.0%)	117(54.7%)	214(32.5%)
Exactly True	58(28.7%)	100(49.5%)	44(21.8%)	202(30.7%)
Total	176(26.7%)	219(33.3%)	263(40.0%)	658(100.0%)

Chi-square statistics			
Statistic	Value	Df	p-value
Pearson χ^2	69.510 ^a	6	.000
Likelihood ratio	73.297	6	.000

Source: Research Data (2022)

The level of self-efficacy in accurate self-appraisal varies across and within the schools. For Girls Only schools, the level ranged from high (49.5%) moderately high (22%), and moderate (33%). In Mixed schools, the distribution is as follows: high (21.8%), moderately high (54.7%), moderate (39.3%) and low (92.3%). In Boys’ only, high levels of self-efficacy (28.7%), moderately high (23.3%), moderate (27.3%), and low (7.7%). Many students in all types of schools have high efficacy beliefs in accurate self-appraisal. In contrast to girls-only schools, a substantially larger percentage of students in boys-only and mixed schools exhibit low self-efficacy beliefs.

H₀₁: There is no statistically significant relationship between type of school and accurate self-appraisal efficacy among secondary school students in Uasin Gishu County.

The relationship between the type of school and the accurate self-appraisal factor of career-specific self-efficacy belief was investigated using a chi-square test of independence yielding a significant relationship, $\chi^2 (6, N = 658) = 69.51, p = .000$. This implies that there are differences in accurate self-appraisal beliefs depending on the type of school .

The descriptive output suggests that students attending schools exclusively for girls and boys show more confidence in their capacity to evaluate themselves than students attending exclusively mixed. This may be related to self-appraisal gender biases. Prior research demonstrates how demographic traits affect thoughts about one's effectiveness. Ajayi, Moosa, and Aloka (2023) reference Mudhovozi and Chireshe (2017) as saying that South African learners' career decisions are influenced by the type of school they attend. Schools in affluent community present learners with more career opportunities and options that are relevant to demands in the job market while schools in disadvantaged communities associated career decisions to the traditional careers, such as, nursing and teaching.

Citation: Serem, S; Ngigi, S. K & Nduku, E. (2024). Influence of Demographic Characteristics on The Level of Career Self Efficacy Beliefs Among Secondary School Students in Uasin Gishu County, Kenya. *Journal of Popular Education in Africa*. 8(10), 17 – 38.

Table 2: Distribution of Accurate Self Appraisal Based on Gender

Accurate self – appraisal	Gender		Total (F/ %)
	Male (F/ %)	Female (F/ %)	
Not at all true	6(46.2%)	7(33.3%)	13(2.0%)
Hardly True	108(47.2%)	121(52.8%)	229(34.8%)
Moderately True	116(54.2%)	98(45.8%)	214(32.5%)
Exactly True	78(38.6%)	124(61.4%)	202(30.7%)
Total	308(46.8%)	350(53.2%)	658(100.0%)

Chi-square statistics			
Statistic	Value	Df	p-value
Pearson χ^2	10.165 ^a	3	.017
Likelihood ratio	10.216	3	.017

Source: Research Data (2022)

Proportionately, females' levels of self-efficacy beliefs ranged from high (61.4%), moderately high (45.8%), moderately low (52.8%), and low (33.3%). In terms of self-evaluation, males who reported high levels of self-efficacy were 38.6%, followed by those who reported moderately high (54.2%), moderately low (47.2%), and low (46.2%) levels. Though females seem to have larger levels of high and somewhat low self-efficacy compared to men, both sexes are almost equally represented in terms of their degrees of self-efficacy beliefs.

H₀₂: *There is no statistically significant relationship between gender and accurate self-appraisal efficacy among secondary school students in Uasin Gishu County.*

The chi-square test of independence was used to investigate the relationship between gender and the accurate self-appraisal component of career-specific self-efficacy beliefs. It yielded a statistically significant relationship, $\chi^2 (3, N = 658) = 10.17, p = .017$. This suggests that gender influences accurate self-appraisal component of career-specific self-efficacy belief. This suggests that, unlike boys, girls are likely to express more confidence in their ability to accurately appraise themselves. This is consistent with previous studies that established gender differences in accurate self-appraisal (Chen (2020); and Fatima et al., (2017)). According to Chen (2020) female students' English learning ability efficacy was higher than males.

Citation: Serem, S; Ngigi, S. K & Nduku, E. (2024). Influence of Demographic Characteristics on The Level of Career Self Efficacy Beliefs Among Secondary School Students in Uasin Gishu County, Kenya. *Journal of Popular Education in Africa*. 8(10), 17 – 38.

Table 3: Distribution of Accurate Self Appraisal Based on Category of School

Accurate self – appraisal	School Category				Total (F/ %)
	National (F/ %)	Extra-county (F/ %)	County (F/ %)	Sub-County (F/ %)	
Not at all true	0(0.0%)	0(0.0%)	3(23.1%)	10(76.9%)	13(2.0%)
Hardly True	0(0.0%)	0(0.0%)	186(81.2%)	43(18.8%)	229(34.8%)
Moderately True	1(2.3%)	117(54.7%)	61(28.5%)	35(16.4%)	214(32.5%)
Exactly True	43(21.3%)	145(71.8%)	14(6.9%)	0(0.0%)	202(30.7%)
Total	44(6.7%)	262(39.8%)	264(40.1%)	88(13.4%)	658(100.0%)

Chi-square statistics			
Statistic	Value	Df	p-value
Pearson χ^2	485.724 ^a	9	.000
Likelihood ratio	585.792	9	.000

Source: Research Data (2022)

The representation shows that Extra County (71.8%) and National (21.3%) school categories demonstrated high levels of self-efficacy belief in accurate self-appraisal compared to County (6.9%) and Subcounty (0.0%) school categories. Extra county schools (54.7%) exhibited higher representation of moderately high levels of self-efficacy compared to county (28.5%) and sub-county (16.4%). There was no representation of low levels of accurate self-appraisal in National and extra-county schools. Sub-county schools (18.8%) reported a much higher percentage of poor self-efficacy ratings than county schools (81.2%). Notably, students at county and sub-county schools have low levels of self-efficacy. Students in national and extra-county schools depict higher self-efficacy beliefs in accurate self-appraisal.

H₀₃: There is no statistically significant relationship between category of school and accurate self-appraisal efficacy among secondary school students in Uasin Gishu County.

The relationship between the school category and the accurate self-appraisal component was examined using a chi-square test of independence. It yielded a statistically significant relationship between the variables $\chi^2 (9, N = 658) = 485.72, p = .000$. This suggests that depending on the school category, there are differences in the expression of the self-appraisal component of career-specific self-efficacy belief. In comparison to students in county and sub-county schools, students in National and extra-county schools showed higher efficacy levels. Career self-efficacy is categorized by Lent & Brown (2020) as a process-related construct that may be affected by career interventions. It seems that differences in self-efficacy are related to the accessible supporting environment. Observably, national and extra county schools are established in physical and human resources. Therefore, it is likely that these categories support the career needs of their students leading to their efficacy in career decision making.

Citation: Serem, S; Ngigi, S. K & Nduku, E. (2024). Influence of Demographic Characteristics on The Level of Career Self Efficacy Beliefs Among Secondary School Students in Uasin Gishu County, Kenya. *Journal of Popular Education in Africa*. 8(10), 17 – 38.

Representation of Occupational Information Based on Demographic Characteristics

Table 4-6 captures the representation of occupational information sub variable based on type of school, gender and category of school.

Table 4: Distribution of Occupational Information Based on Type of School

Occupational information	School type			Total (F/ %)
	Boys Only (F/ %)	Girls Only (F/ %)	Mixed (F/ %)	
Not at all true	2(6.5%)	11(35.5%)	18(58.1%)	31(4.7%)
Hardly True	46(18.3%)	74(29.5%)	131(52.2%)	251(38.1%)
Moderately True	86(33.7%)	73(28.6%)	96(37.6%)	255(38.8%)
Exactly True	42(34.7%)	61(50.4%)	18(14.9%)	121(18.4%)
Total	176(26.7%)	219(33.3%)	263(40.0%)	658(100.0%)
Chi-square statistics				
Statistic	Value	Df	p-value	
Pearson χ^2	63.729 ^a	6	.000	
Likelihood ratio	69.679	6	.000	

Source: Research Data (2022)

The representation shows that 50.4% of Girls' schools demonstrated high self-efficacy in gathering occupational information followed by Boys Only (34.7%) and Mixed (14.9%) respectively. On the other hand, Mixed schools (37.6%) had a significant representation on moderate levels (92.3%) compared to Boys Only (33.7%) and Girls Only (28.6%). Mixed schools (52.2%) had significantly high representation in moderately low levels of efficacy in gathering occupational information followed by girls only (29.5%) and Boys Only (18.3%). Lastly, Mixed schools (58.1%) showed a moderately high representation of students with lower levels of efficacy in gathering occupational information than Girls Only (35.5%) and Boys Only (6.5%). A considerable percentage of students in mixed schools demonstrated low self-efficacy. Students attending schools exclusively for boys and girls were represented in moderately high and high self-efficacy beliefs in gathering occupational information.

The **H₀₄**: *There is no statistically significant relationship between type of school and gathering occupational information efficacy among secondary school students in Uasin Gishu County.*

The relationship between the type of school and gathering occupational knowledge component of career-specific self-efficacy belief was investigated using a chi-square test of independence. A significant correlation existed between these variables: χ^2 (6, N = 658) = 63.73, p = .000. This suggests the gathering of occupational information is represented differentially depending on the types of school. Findings indicated that compared to students in Boys and Mixed schools, there were proportionately more students in Girls ' schools with high levels of self-efficacy in their capacity to gather occupational information.

Citation: Serem, S; Ngigi, S. K & Nduku, E. (2024). Influence of Demographic Characteristics on The Level of Career Self Efficacy Beliefs Among Secondary School Students in Uasin Gishu County, Kenya. *Journal of Popular Education in Africa*. 8(10), 17 – 38.

Table 5: Distribution of Occupational Information Based on Gender

Occupational information	Gender		Total (F/ %)
	Male (F/ %)	Female (F/ %)	
Not at all true	11(35.5%)	20(64.5%)	31(4.7%)
Hardly True	113(45.0%)	138(55.0%)	251(38.1%)
Moderately True	114(52.5%)	121(47.5%)	255(38.8%)
Exactly True	50(41.3%)	71(58.7%)	121(18.4%)
Total	308(46.8%)	350(53.2%)	658(100.0%)
Chi-square statistics			
Statistic	Value	Df	p-value
Pearson χ^2	6.757 ^a	3	.080
Likelihood ratio	6.789	3	.079

Source: Research Data (2022)

The representation shows that gender on the four levels of efficacy in gathering occupational information is evenly distributed. Females (58.7%) demonstrated a slightly higher self-efficacy belief than males (41.3%). Accordingly, fewer females (47.5%) exhibited moderate levels unlike males (52.5%). Conversely, females had more representation in relatively low efficacy and low levels (55.0% and 64.5%) unlike males (45.0% and 35.5%). As a result, while females scored well on the high efficacy scale, they are also highly represented on the poor efficacy scale in obtaining occupational information.

The H_{05} : *There is no statistically significant relationship between gender and gathering occupational information efficacy among secondary school students in Uasin Gishu County.*

The relationship between gender and level of self-efficacy belief in obtaining occupational information investigated using a chi-square test of independence yielded a statistically insignificant relationship (χ^2 (3, N = 658) = 6.76, p = .080). It suggests that gender does not influence a student's judgment of conviction in gathering occupational information. Other career competencies (accurate self-appraisal, goal selection, and planning for the future) established a significant relationship with gender. It may be attributed to lower variability.

Citation: Serem, S; Ngigi, S. K & Nduku, E. (2024). Influence of Demographic Characteristics on The Level of Career Self Efficacy Beliefs Among Secondary School Students in Uasin Gishu County, Kenya. *Journal of Popular Education in Africa*. 8(10), 17 – 38.

Table 6: Distribution of Occupational Information Based on Category of School

Occupational information	Category of school				Total (F/ %)
	National (F/ %)	Extra-county (F/ %)	County (F/ %)	Sub-County (F/ %)	
Not at all true	0(0.0%)	25(80.6%)	3(9.7%)	3(9.7%)	31(4.7%)
Hardly True	0(0.0%)	46(18.3%)	145(57.8%)	60(23.9%)	251(38.1%)
Moderately True	0(0.0%)	116(45.5%)	114(44.7%)	25(9.8%)	255(38.8%)
Exactly True	44(36.4%)	75(62.0%)	2(1.7%)	0(0.0%)	121(18.4%)
Total	44(6.7%)	262(39.8%)	264(40.1%)	88(13.4%)	658(100.0%)

Chi-square statistics			
Statistic	Value	Df	p-value
Pearson χ^2	366.707 ^a	9	.000
Likelihood ratio	371.521	9	.000

Source: Research Data (2022)

The representation shows that Extra County (62.0%) and National (36.4%) school categories demonstrated high levels of self-efficacy belief in gathering occupational information compared to county (1.7%) and sub-county school (0.0%) categories. Accordingly, Extra county schools (45.5%) exhibited moderate levels compared to County (44.7%) and Subcounty (9.8%). The national school category did not have representation in low levels of gathering occupational information. County schools (57.8%) had a considerably high representation of relatively low levels of gathering occupational information followed by sub-county schools (23.9%), and extra county (18.3%). Observably, National and extra-county school categories are highly efficacious in gathering occupational information compared to county and sub-county school categories.

The H_{06} : *There is no statistically significant relationship between category of school and gathering occupational information efficacy among secondary school students in Uasin Gishu County.*

The relationship between the school category and gathering occupational information was investigated using a chi-square test of independence. A significant relationship existed between these variables, χ^2 (9, N = 658) = 366.71, p =.000. This shows that self-efficacy in gathering occupational information is dependent on the school category. Comparing students in county and sub-county schools to those in national and extra-county schools, the former have more confidence in their capacity to get occupational knowledge. The respondents' varying cognitive abilities and resource allocation may be the cause of this.

Representation of goal selection according to demographic characteristics

Table 7-9 captures the representation of goal selection sub variable based type of school, gender and category of school.

Citation: Serem, S; Ngigi, S. K & Nduku, E. (2024). Influence of Demographic Characteristics on The Level of Career Self Efficacy Beliefs Among Secondary School Students in Uasin Gishu County, Kenya. *Journal of Popular Education in Africa*. 8(10), 17 – 38.

Table 7: Distribution of Goal Selection Based on Type of School

Goal selection	Type of school			Total (F/ %)
	Boys Only (F/ %)	Girls Only (F/ %)	Mixed (F/ %)	
Not at all true	0(0.0%)	0(0.0%)	4(100.0%)	4(0.6%)
Hardly True	0(0.0%)	21(20.2%)	83(79.8%)	104(15.8%)
Moderately True	30(16.4%)	66(36.1%)	87(47.5%)	183(27.8%)
Exactly True	146(39.8%)	132(36.0%)	89(24.3%)	367(55.8%)
Total	176(26.7%)	219(33.3%)	263(40.0%)	658(100.0%)

Chi-square statistics			
Statistic	Value	Df	p-value
Pearson χ^2	137.653 ^a	6	.000
Likelihood ratio	159.998	6	.000

Source: Research Data (2022)

The representation shows that Boys' schools (39.8%) demonstrated high levels of self-efficacy belief in goal selection compared to Girls' (36.1%) and Mixed schools (24.3%). The Boys' category did not have representation in the low ratings of goal selection compared to Girls Only (20.2%) and Mixed schools (79.8%). Mixed schools (47.5%) had a significant representation on moderate levels compared to Girls' (36.1%) and Boys' (16.4%). The findings suggest that Boys' schools have higher confidence in goal selection.

The H_{07} : *There is no statistically significant relationship between type of school and goal selection efficacy among secondary school students in Uasin Gishu County.*

The relationship between the type of school and efficacy in goal selection investigated using a chi-square test of independence yielded a significant relationship, $\chi^2 (6, N = 658) = 137.65, p = .000$. This shows that depending on the kind of school, there are differences in the representation of the goal selection facet of career-specific self-efficacy belief. It implies that students in boys-only schools are probably more confident in their capacity to select career goals than in Girls' and mixed schools. Inherent gender biases in goal selection capabilities may be responsible for the variation.

Citation: Serem, S; Ngigi, S. K & Nduku, E. (2024). Influence of Demographic Characteristics on The Level of Career Self Efficacy Beliefs Among Secondary School Students in Uasin Gishu County, Kenya. *Journal of Popular Education in Africa*. 8(10), 17 – 38.

Table 8: Distribution of Goal Selection Based on Gender

Goal selection	Gender		Total (F/ %)
	Male (F/ %)	Female (F/ %)	
Not at all true	2(50.0%)	2(50.0%)	4(0.6%)
Hardly True	43(41.3%)	61(58.7%)	104(15.8%)
Moderately True	72(39.3%)	111(60.7%)	183(27.8%)
Exactly True	191(52.0%)	176(48.0%)	367(55.8%)
Total	308(46.8%)	350(53.2%)	658(100.0%)

Chi-square statistics			
Statistic	Value	Df	p-value
Pearson χ^2	9.397 ^a	3	.024
Likelihood ratio	9.437	3	.024

Source: Research Data (2022)

The representation shows that males (52.0%) expressed higher self-efficacy belief in goal selection than females (48.0%). Conversely, there was a high representation of females (60.7%) expressing a moderate level of efficacy compared to males (39.3%). Low efficacy is demonstrated by a higher female (58.7%) representation than males (41.3%). Whereas the findings indicate that most females have moderate (60.7%) and low (58.7%) levels of self-efficacy in goal selection, males are highly efficacious in goal selection. Conceivably, their proportionate representation is relatively small in the low (41.3%) and moderate (39.3%) levels.

H₀₈: There is no statistically significant relationship between gender and goal selection efficacy among secondary school students in Uasin Gishu County.

The relationship between the type of school and goal selection component of career-specific self-efficacy belief investigated using a chi-square test of independence yielded a statistically significant relationship, $\chi^2 (3, N = 658) = 9.40, p = .024$. It suggests that the representation of goal selection varies according to gender. It implies that males are probably more confident in their capacity to select career goals.

Citation: Serem, S; Ngigi, S. K & Nduku, E. (2024). Influence of Demographic Characteristics on The Level of Career Self Efficacy Beliefs Among Secondary School Students in Uasin Gishu County, Kenya. *Journal of Popular Education in Africa*. 8(10), 17 – 38.

Table 9: Distribution of Goal Selection Based on Category of School

Goal selection	Category of school				Total (F/ %)
	National (F/ %)	Extra-county (F/ %)	County (F/ %)	Sub-County (F/ %)	
Not at all true	0(0.0%)	0(0.0%)	2(50.0%)	2(50.0%)	4(0.6%)
Hardly True	0(0.0%)	0(0.0%)	56(53.6%)	48(46.2%)	104(15.8%)
Moderately True	0(0.0%)	0(0.0%)	146(79.8%)	37(20.2%)	183(27.8%)
Exactly True	44(12.0%)	262(71.4%)	60(16.3%)	1(0.3%)	367(55.8%)
Total	44(6.7%)	262(39.8%)	264(40.1%)	88(13.4%)	658(100.0%)

Chi-Square Statistics			
Statistic	Value	Df	p-value
Pearson χ^2	512.134 ^a	9	.000
Likelihood ratio	631.112	9	.000

Source: Research Data (2022)

The representation shows that respondents from Extra County (71.4%) and National (12.0%) school categories demonstrated a higher self-efficacy belief in goal selection than the county (16.3%) and sub-county school (0.3%) categories. The County schools (79.8%) showed a moderate efficacy than the sub-county (20.2%) category. The National and the Extra county categories were not represented in low efficacy in goal selection. County schools (53.6%) had a higher representation of relatively low levels of goal selection followed by sub-county schools (46.92%). The findings reveal contrasting levels of self-efficacy beliefs according to schools. The county and sub-county schools’ students have lower self-efficacy beliefs than the Extra County and National school categories. This may be attributed to variations in human and physical resource allocation. Ideally, accessible supportive environments are sources of self-efficacy beliefs.

The H_{09} : *There is no statistically significant relationship between category of school and gathering goal selection efficacy among secondary school students in Uasin Gishu County.*

The relationship between the school category and the goal selection component of career-specific self-efficacy belief was investigated using the chi-square test of independence yielding a significant relationship, $\chi^2 (9, N = 658) = 512.13, p = .000$. It suggests that the representation of goal selection varies based on the category of school. Students in National and Extra county schools have more confidence in selecting goals. This might be explained by the respondents' varying levels of cognitive abilities and resource allocation.

Representation of Planning for the Future According to Demographic Characteristics

Table 10-12 captures the representation of planning for the future based on type of school, gender and category of school.

Citation: Serem, S; Ngigi, S. K & Nduku, E. (2024). Influence of Demographic Characteristics on The Level of Career Self Efficacy Beliefs Among Secondary School Students in Uasin Gishu County, Kenya. *Journal of Popular Education in Africa*. 8(10), 17 – 38.

Table 10: Distribution of Planning for the Future Based on Type of School

Planning for the Future	Type of school			Total (F/ %)
	Boys Only (F/ %)	Girls Only (F/ %)	Mixed (F/ %)	
Not at all true	3(100.0%)	0(0.0%)	0(0.0%)	3(0.5%)
Hardly True	8(8.7%)	18(19.6%)	66(71.7%)	92(14.0%)
Moderately True	93(33.0%)	76(27.0%)	113(40.1%)	282(42.9%)
Exactly True	72(25.6%)	125(44.5%)	84(29.9%)	281(42.7%)
Total	176(26.7%)	219(33.3%)	263(40.0%)	658(100.0%)

Chi-square statistics

Statistic	Value	Df	p-value
Pearson χ^2	73.213 ^a	6	.000
Likelihood ratio	72.996	6	.000

Source: Research Data (2022)

The representation shows that Girls’ only schools demonstrated higher self-efficacy beliefs in planning for the future than Boys only (25.6%) and Mixed schools (29.9%). The Girls-only did not have representation in the lowest ratings of planning for the future compared to Boys only (100%).

Mixed schools (40.1%) had a significant representation on moderate levels compared to Boys Only (33.0%) and Girls Only (27.0 %).

The H_{o10} : *There is no statistically significant relationship between type of school and gathering planning for the future efficacy among secondary school students in Uasin Gishu County.*

A Chi-square test of independence established a significant relationship $\chi^2 (6, N = 658) = 73.21$, $p = .000$ between type of school and planning for the future. It suggests that planning for the future is differentially represented depending on the type of school. Findings show that students in Girls Only schools are probably more confident when it comes to planning for the future. According to Vilas (2019), merely belonging to a particular school generates or boosts self-efficacy in one way or the other.

Citation: Serem, S; Ngigi, S. K & Nduku, E. (2024). Influence of Demographic Characteristics on The Level of Career Self Efficacy Beliefs Among Secondary School Students in Uasin Gishu County, Kenya. *Journal of Popular Education in Africa*. 8(10), 17 – 38.

Table 11: Distribution of Planning for the Future Based on Gender

Planning for the Future	Gender		Total (F/ %)
	Male (F/ %)	Female (F/ %)	
Not at all true	3(100.0%)	0(0.0%)	3(0.5%)
Hardly True	46(50.0%)	46(50.0%)	92(14.0%)
Moderately True	145(51.4%)	137(48.6%)	282(42.9%)
Exactly True	114(40.6%)	167(59.4%)	281(42.7%)
Total	308(46.8%)	350(53.2%)	658(100.0%)

Chi-square statistics			
Statistic	Value	Df	p-value
Pearson χ^2	10.586 ^a	3	.014
Likelihood ratio	11.760	3	.008

Source: Research Data (2022)

The representation shows that females (59.4%) demonstrated high self-efficacy belief in planning for the future compared to males (40.6%). There was a near-even representation of females (48.6%) and males (51.4%) expressing a moderate level of efficacy. The gender representation on low efficacy was equal (50%).

The H_{0II} : *There is no statistically significant relationship between gender and planning for the future efficacy among secondary school students in Uasin Gishu County.*

Gender had a statistically significant relationship with efficacy in planning for the future, χ^2 (3, N = 658) = 10.59, p = .014. This suggests gender-based differences in the representation of efficacy in preparing for the future. This can be attributed to societal norms that socialize males and females differentially.

Table 12: Distribution of Planning for the Future Based on School Category

Planning for the Future	School Category				Total (F/ %)
	National (F/ %)	Extra-county (F/ %)	County (F/ %)	Sub-County (F/ %)	
Not at all true	0(0.0%)	0(0.0%)	2(50.0%)	2(50.0%)	4(0.6%)
Hardly True	0(0.0%)	3(3.3%)	49(53.3%)	40(43.4%)	104(15.8%)
Moderately True	0(0.0%)	23(8.2%)	211(74.8%)	48(17.0%)	183(27.8%)
Exactly True	44(15.7%)	233(82.9%)	4(1.4%)	0(0.0%)	367(55.8%)
Total	44(6.7%)	262(39.8%)	264(40.1%)	88(13.4%)	658(100.0%)

Chi-square statistics			
Statistic	Value	Df	p-value
Pearson χ^2	592.547 ^a	9	.000
Likelihood ratio	715.796	9	.000

Source: Research Data (2022)

Citation: Serem, S; Ngigi, S. K & Nduku, E. (2024). Influence of Demographic Characteristics on The Level of Career Self Efficacy Beliefs Among Secondary School Students in Uasin Gishu County, Kenya. *Journal of Popular Education in Africa*. 8(10), 17 – 38.

The representation shows that respondents from Extra County (82.9%) and National (15.7%) school categories demonstrated high levels of self-efficacy belief in planning for the future compared to county (1.4%) and sub-county school (0.0%) categories. County schools (74.8%) exhibited high representation for moderate level compared to sub-county (17.0%) category. The national school (0.0%) and Extra county (3.3%) categories barely had representation in low levels of goal selection. County schools (53.6%) had a high representation of relatively low levels of goal selection followed by sub-county schools (43.4%). Compared to the county and sub-county categories, the National and Extra-county school categories stand out for having high levels of self-efficacy.

The H_{o12} : *There is no statistically significant relationship between category of school and planning for the future efficacy among secondary school students in Uasin Gishu County.*

The relationship between school category and efficacy in planning for the future yielded a statistically significant association, $\chi^2 (9, N = 658) = 512.13, p = .000$. This shows that depending on the category of school, there may be differences in the representation of efficacy beliefs in planning for the future. It implies that compared to students in county and sub-county schools, those in National and extra-county schools are likely to have more confidence in their capacity to make long-term career plans. This could be occasioned by variations in resource allocation.

Representation of Problem Solving According to Demographic Characteristics

Table 13-15 captures the representation of problem solving sub variable based on type of school, gender and category of school.

Table 13: Distribution of Problem Solving Based on Type of School

Problem Solving	Type of school			Total (F/ %)
	Boys Only (F/ %)	Girls Only (F/ %)	Mixed (F/ %)	
Not at all true	0(0.0%)	0(0.0%)	1(100.0%)	1(0.2%)
Hardly True	0(0.0%)	3(3.8%)	76(96.2%)	79(12.0%)
Moderately True	52(24.2%)	77(35.8%)	86(40.0%)	215(32.7%)
Exactly True	124(34.2%)	139(11.7%)	100(27.5%)	363(55.2%)
Total	176(26.7%)	219(33.3%)	263(40.0%)	658(100.0%)
Chi-square statistics				
Statistic	Value	Df	p-value	
Pearson χ^2	130.915 ^a	6	.000	
Likelihood ratio	148.467	6	.000	

Source: Research Data (2022)

The representation shows that Boys' schools (34.2%) demonstrated high levels of self-efficacy belief in problem-solving dimension compared to Girls Only (11.7%) and Mixed schools (27.5%) respectively. The Girls Only and Boys Only categories did not have representation in the lowest ratings of problem-solving compared to Mixed school (96.2%) which had a significant representation on relatively low levels. Moderate levels of self-efficacy in problem-solving were

Citation: Serem, S; Ngigi, S. K & Nduku, E. (2024). Influence of Demographic Characteristics on The Level of Career Self Efficacy Beliefs Among Secondary School Students in Uasin Gishu County, Kenya. *Journal of Popular Education in Africa*. 8(10), 17 – 38.

almost evenly distributed across Boys Only (24.2%), Girls Only (35.8%), and Mixed schools (40.0%).

The H_{o13} : *There is no statistically significant relationship between type of school and problem-solving efficacy among secondary school students in Uasin Gishu County.*

A chi-square test of independence investigated the relationship between the type of school and the problem-solving component efficacy yielded a significant relationship, χ^2 (6, N = 658) = 130.92, p =.000. This implies that efficacy in problem-solving is determined by the type of school. In comparison to students in mixed and Girls' schools, Boys showed more confidence in their ability to solve career problems. This discrepancy might be explained by variation in the school culture socialization.

Table14: Distribution of Problem Solving Based on Gender

Problem Solving	Gender		Total (F/ %)
	Male (F/ %)	Female (F/ %)	
Not at all true	0(0.0%)	1(100.0%)	1(0.2%)
Hardly True	41(51.9%)	38(48.1%)	79(12.0%)
Moderately True	93(43.3%)	122(56.7%)	215(32.7%)
Exactly True	174(47.9%)	189(52.1%)	363(55.2%)
Total	308(46.8%)	350(53.2%)	658(100.0%)

Chi-square statistics			
Statistic	Value	Df	p-value
Pearson χ^2	2.977 ^a	3	.395
Likelihood ratio	3.361	3	.339

Source: Research Data (2022)

The representation shows that females (52.1%) demonstrated higher self-efficacy in solving career problems than males (47.9%). Females also showed significantly high representation in moderate rating of problem-solving ability (56.7%) compared to males (47.9%) The gender representation in low rating of efficacy was nearly equal between males (51.9%) and females (48.1%).

The H_{o14} : *There is no statistically significant relationship between gender and problem solving efficacy among secondary school students in Uasin Gishu County.*

A chi-square test of independence on the relationship between problem-solving efficacy and gender was statistically insignificant, χ^2 (3, N = 658) = 2.98, p =.395. It suggests that girls' and boys' confidence in their capacity to handle career-related issues is comparable. Compared to other career competencies, problem-solving and gathering occupational information are independent of gender.

Citation: Serem, S; Ngigi, S. K & Nduku, E. (2024). Influence of Demographic Characteristics on The Level of Career Self Efficacy Beliefs Among Secondary School Students in Uasin Gishu County, Kenya. *Journal of Popular Education in Africa*. 8(10), 17 – 38.

Table 15: Distribution of Problem Solving Based on Category of School

Problem solving	Category of school				Total (F/ %)
	National (F/ %)	Extra-county (F/ %)	County (F/ %)	Sub-county (F/ %)	
Not at all true	0(0.0%)	0(0.0%)	4(100.0%)	0(0.0%)	4(0.6%)
Hardly True	0(0.0%)	0(0.0%)	33 (41.8%)	46(58.2%)	104(15.8%)
Moderately True	0(0.0%)	0(0.0%)	174(80.9%)	41(19.1%)	183(27.8%)
Exactly True	44(12.1%)	262(72.2%)	56(15.4%)	1(0.3%)	367(55.8%)
Total	44(6.7%)	262(39.8%)	264(40.1%)	88(13.4%)	658(100.0%)

Chi-square statistics

Statistic	Value	Df	p-value
Pearson χ^2	564.800 ^a	9	.000
Likelihood ratio	662.306	9	.000

Source: Research Data (2022)

The representation shows that respondents from Extra County (72.2%) and National (12.1%) school categories demonstrated high levels of self-efficacy belief in problem-solving compared to county (15.4%) and sub-county school (0.3%) categories. County schools (80.9%) exhibited high representation in moderate levels compared to the sub-county (19.1%) category. National school (0.0%) and Extra county (0.0%) categories did not have representation in low levels of problem-solving. Sub-county schools (58.2%) had a high representation of relatively low problem-solving self-efficacy followed by county schools (41.8%).

The H_{015} : *There is no statistically significant relationship between category of school and gathering occupational information efficacy among secondary school students in Uasin Gishu County.*

The chi-square test of independence examining the relationship between the problem-solving efficacy and school category yielded a statistically significant relationship, χ^2 (9, N = 658) = 564.80, p = .000. This suggests differences in problem-solving efficacy based on categories. The descriptive data shows that students in National and Extra county schools are inclined to high efficacy in problem-solving compared to students in county and sub-county schools. This variance can be a result of a differential supportive environment.

Conclusion

In conclusion, the findings suggest that students’ levels of self-efficacy beliefs in accurate self-appraisal, goal selection and planning for the future vary depending on their gender, type and category of school. The problem solving and gathering occupational information were significantly associated with type and category of school but insignificantly associated with gender. Further, students of the National and extra county school categories demonstrated highly efficacious beliefs across the five career competencies. Those in county and subcounty showed least efficacious beliefs across the competencies. Additionally, Girls only schools showed high efficacy levels compared to Boys only and mixed secondary schools.

Citation: Serem, S; Ngigi, S. K & Nduku, E. (2024). Influence of Demographic Characteristics on The Level of Career Self Efficacy Beliefs Among Secondary School Students in Uasin Gishu County, Kenya. *Journal of Popular Education in Africa*. 8(10), 17 – 38.

Recommendations

The relationship between demographic characteristics and levels of self-efficacy beliefs among secondary school students calls for uniformity and targeted career interventions to address disparities across the types and categories of schools. Further, periodic assessment of levels of self-efficacy beliefs should be conducted to ascertain gaps in mastery of career decision making competencies.

Citation: Serem, S; Ngigi, S. K & Nduku, E. (2024). Influence of Demographic Characteristics on The Level of Career Self Efficacy Beliefs Among Secondary School Students in Uasin Gishu County, Kenya. *Journal of Popular Education in Africa*. 8(10), 17 – 38.

References

- Ajayi, O.B., Moosa, M., & Aloka, P.J. (2023). Influence of selected social factors on career decision making of grade 12 learners in township secondary schools in South Africa. *Journal of education*.
- Chen, P. D, & Simpson, P. A. (2015). Does personality matter? Applying Holland's typology to analyze students' self-selection into science, technology, engineering, and mathematics majors. *Journal of higher education*, (86)5, 725-750.
- Cherry, K. (2020). Self-efficacy and why believing in yourself matters.
<https://www.verywellm/>
- Jackson, S. L. (2009). *Research methods and statistics: a critical thinking approach*. 3rd Ed. Belmont, CA: Wadsworth.
- Lent R. W., Brown S. D., Hackett G. (2000). Contextual supports and barriers to career choice: A social cognitive analysis. *Journal of counseling psychology*, 47, 36–49.
- Lent, R. W., Hackett, G., & Brown, S. D. (2008). Social cognitive career theory. In F. T. L. Leong (Editor-in-Chief), W.B. Walsh (Senior Editor) & P. J. Hartung (Associate Editor), *Encyclopedia of counseling*, 4 Career counseling. (pp. 1627– 1630).
- Lent, R.W., & Brown, S.D. (2020). Career decision making, fast and slow: Toward an integrative model of intervention for sustainable career choice. *Journal of Vocational Behavior*, 120, 103448.
- Mwaura, M.N., Kimani, M. & Manyasi, B. (2019). The relationship between academic self-efficacy as a determinant of career aspiration and academic performance of students in public secondary schools in Nairobi County, Kenya. *International journal of academic research and development*, 4, 4, 17-21.
- Niles, S. G., & Harris-Bowlsbey, J. (2013). *Career development interventions in the 21st century* (4th ed). Pearson.
- Rahmati, Z. (2015). The study of academic burnout in students with high and low level of self-efficacy. *Procedia -social and behavioral sciences*, 171, 49-55.
- Savickas, M. L. (2019). The world of work and career interventions. In M. Savickas, *Career counseling* (2nd ed., pp. 3–14). American psychological association.
- Usher, E. L., & Pajares, F. (2008). Self-efficacy for self-regulated learning: A validation study. *Educational and Psychological Measurement*, 68(3), 443-463.
- Wu, S., Zhang, K., Zhou, S., & Chen, W. (2020). Personality and career decision making self-efficacy of students from poor rural areas in China. *Social behaviour and personality: An international journal*, 48(5), e8753.
- Yilmaz, O. (2017). Learner centered classroom in science instruction: Providing feedback with technology integration. *International journal of research in education and science*, 3(2), 604-613. doi: 10.21890/ijres.328091.