STEM Research Insight: 001

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INFORMATION SOURCES IN SUBJECT SELECTION: DIFFERENCES BY GENDER AND EDUCATION STAGE

By
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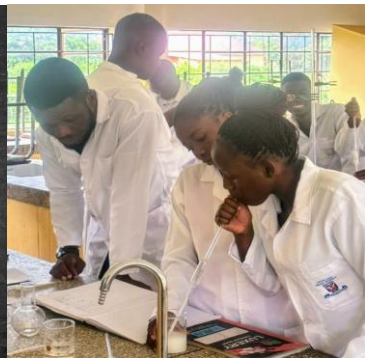
RESEARCH ON "BRIDGING THE INFORMATION GAP TO RETAIN AND RAISE GIRLS' INTEREST IN STEM EDUCATION"





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Information Sources in Subject Selection: Differences by Gender and Educational Stage

Victor Konde, Yee Kwan Tang

Executive Summary

The study investigates how Zambian students at different educational levels—junior secondary, senior secondary, and university—use various information sources when making academic subject choices, with a focus on gender differences.

Findings show that students' preferred information sources evolve with age and education level. Parents and teachers consistently ranked as the most useful and accessible sources across all levels and genders. However, reliance on digital platforms and career advisors increased notably at the university level, while traditional sources like printed materials and siblings declined in influence.

Gender differences were evident: girls valued interpersonal sources (e.g., teachers, career advisors) more than boys. Access to important sources like teachers and printed materials decreased with higher education, creating gaps between information usefulness and accessibility.

The study calls for tailored, gender-sensitive interventions that reflect students' developmental stages and information needs. Enhancing parental engagement, bridging accessibility gaps, and combating socio-cultural barriers are crucial to supporting equitable and evidence-based subject choices in Zambia and across Africa.

1. Introduction

At every stage, young people face the challenge of making decisions that can shape the trajectory of the rest of their lives. Among the most pivotal of these choices is the selection of academic subjects - a decision that profoundly impacts their educational journey, future career prospects, and personal growth[1]. This decision-making process begins earlier than many realise, with young people gradually assuming more responsibility for their learning from the age of about 12 or 13 (i.e. typically from junior secondary school) onwards[2] [3]. From senior secondary school, an expanded range of subject options makes the decisions more complex.

Although a variety of information sources are available to guide these decisions, their relevance and reliability can vary, leading students to use multiple sources each with distinct influences[4]. Differences in access, trust, and interpretation of information significantly shape the subject choices that students ultimately make[5]. Furthermore, students' preference and ability to critically engage with specific sources of information will likely evolve as they progress from primary to secondary to tertiary education. This cognitive evolution can foster more individualised and evidence-based academic decisions that align with both their interests and future aspirations.

Very few studies to date have systematically investigated the sources of information students rely on when making subject choices, nor has any research explored how these sources of information vary across different educational stages, especially in the context of Africa. Existing studies primarily focus on a single educational level, thereby neglecting the potential shift in the information sources employed. This study seeks to address these gaps by examining ***how students at different educational levels – junior secondary, senior secondary, and university - differ in the information sources that they engaged with for subject decision-making***. The findings will provide new insights into the dynamic and context-dependent nature of academic subject decisions.

This report presents the first set of findings derived from a larger project aimed at enhancing our understanding of gendered differences in subject selection across different educational stages within the African context, where more empirical evidence is warranted to promote parity in education. Specifically, the project seeks to offer new insights into the persistent gender disparities in Science, Technology, Engineering, and Mathematics (STEM) fields – an enduring challenge that is of significant concern to policymakers, educators, and researchers alike.

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[1] Lavrijsen, J. et al. (2021). Understanding school subject preferences: The role of trait interests, cognitive abilities, and perceived engaging teaching. *Personality and Individual Differences*, 174, 110685. https://doi.org/10.1016/j.paid.2021.110685

[2] Anders, J. et al. (2018). The role of schools in explaining individuals' subject choices at age 14. *Oxford Review of Education*, 14(1), special issue, pp75-93. https://doi.org/10.1080/03054985.2018.1409973

[3] National Research Council (US) and Institute of Medicine (US) Board on Children, Youth, and Families (1999). Fischhoff B, Crowell NA, Kipke M (eds). *Adolescent Decision Making: Implications for Prevention Programs: Summary of a Workshop*. Washington (DC): National Academies Press (US).

[4] Areces, D. et al. (2016). Information sources used by high school students in the college degree choice. *Psicothema,* 28(3), pp253-259. doi: 10.7334/psicothema2016.76

[5] Simoes, C. and Soares, A.M. (2010). Applying to higher education: information sources and choice factors. *Studies in Higher Education*, 35(4), pp.371-389. https://doi.org/10.1080/03075070903096490

2. About this Work

2.1. The Research Context

Zambia, a landlocked country in southern Africa, was the empirical location of this study. Zambia is an average African country in terms of economic and human development - it was ranked 22nd place among the 52 African countries in the Human Development Index 2025.

Since the introduction of the 'free basic education' policy in 2002, the country has made remarkable progress in achieving nearly universal access to primary education, with a net enrolment rate of an impressive 97% in 2024[6]. However, challenges remain in facilitating transitions for students from primary to secondary education, and from secondary to tertiary education. The secondary school net enrolment rate was at 49.9% in 2024[7]; and the gross enrolment rate of tertiary education is notably low at only around 7% in the same year[8]. This has prompted the government to make an ambitious goal of doubling the higher education enrolment rate to 15% by 2030[9].

The country has attained near gender equitable enrolment at both primary and secondary levels. Completion rates for girls are now comparable to, or even surpass, those of boys. Nonetheless, gender disparities persist at the tertiary level, where male students constituted 54.2% of total gross enrolment in 2022[10]. This gender gap remarkably widens at postgraduate levels, with women only comprising 35% of all doctoral candidates in 2022.

Moreover, enrolment is heavily skewed towards Health and Welfare (32%) and Business, Administration, and Law (24%), with only 20% of students pursuing degrees in STEM disciplines such as Agriculture, Engineering, ICT, and the Natural Sciences, according to 2022 data. Even fields like ICT (4.4%) and Engineering (6.5%) that offer more promising career prospects are underrepresented. Although participation in STEM was low among both male and female students, the ratio was consistently higher in male (e.g. 25% of all male students in 2022) than in female (14% of all female students in 2022) (Figure 3). The low participation in STEM study in general stands in contrast to the priorities outlined in the country's Eighth National Development Plan, which underscores the central role of STEM in Zambia's long-term socio-economic transformation. The country has an urgent need for targeted strategies to not only achieve gender parity in higher education but also stimulate interest and participation in STEM fields, to better align educational outcomes with the national development goals.

The challenges that Zambia faces in promoting equitable education, particularly at tertiary level and in STEM subjects are reflective of broader trends across many African countries. There are similar enrolment imbalances and underrepresentation in enrolment to STEM fields in the

[6] Ministry of Education (2024). Education Statistics Bulletin 2024. Republic of Zambia. https://www.edu.gov.zm/wp-content/uploads/2024/12/Education-Statistics-Bulletin-2024.pdf
[7] Ibid.
[8] Ministry of Technology and Science (2024) and University World News (2024). https://www.universityworldnews.com/post.php?story=20241018114212544
[9] Ibid.
[10] Higher Education Authority (2024). The State of Higher Education in Zambia 2022. Curricula in Higher Education. https://www.universityworldnews.com/post.php?story=20241018114212544

continent[11] [12]. Zambia makes a representative case for exploring factors that shape students' subject choices throughout their educational journey, particularly regarding STEM pathways. The findings can yield valuable insights for designing targeted interventions not only for Zambia but also are adaptable across the continent.

Figure 1: Number of students sitting final year secondary school examinations

Source: Examinations Council of Zambia, 2023 and Ministry of Information and Media, n.d.

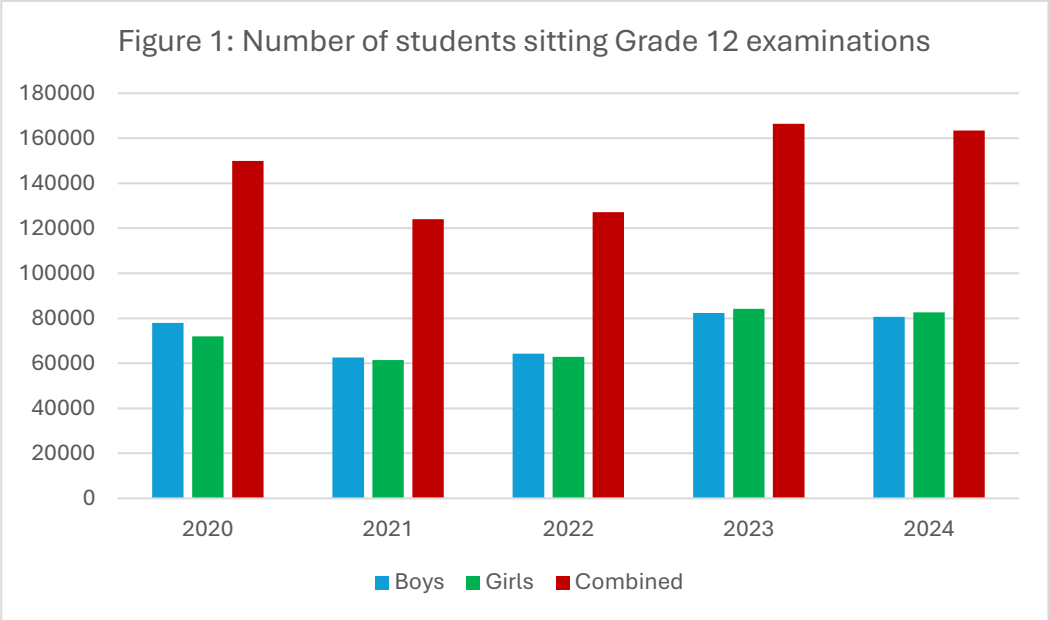
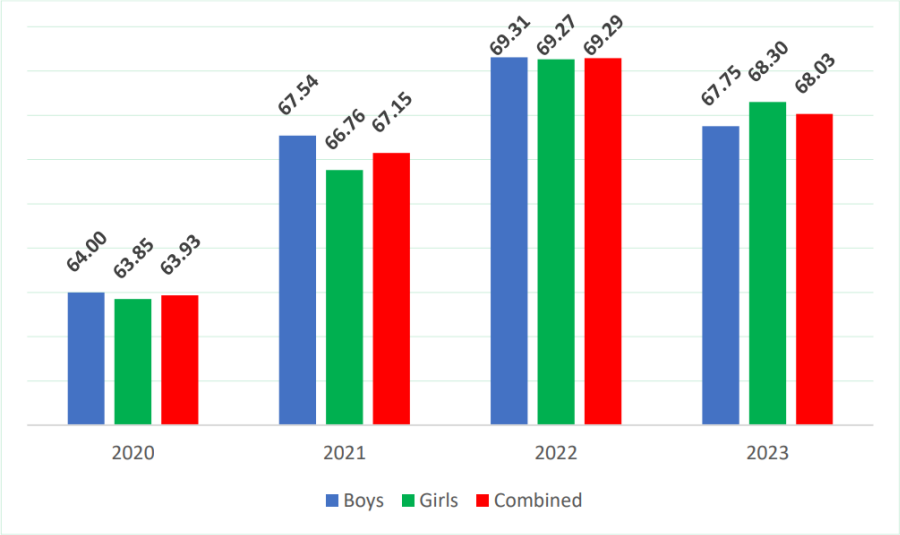


Figure2: Pass rate of students sitting Grade 12 examinations (2020-2023)

Source: Examinations Council of Zambia, 2023

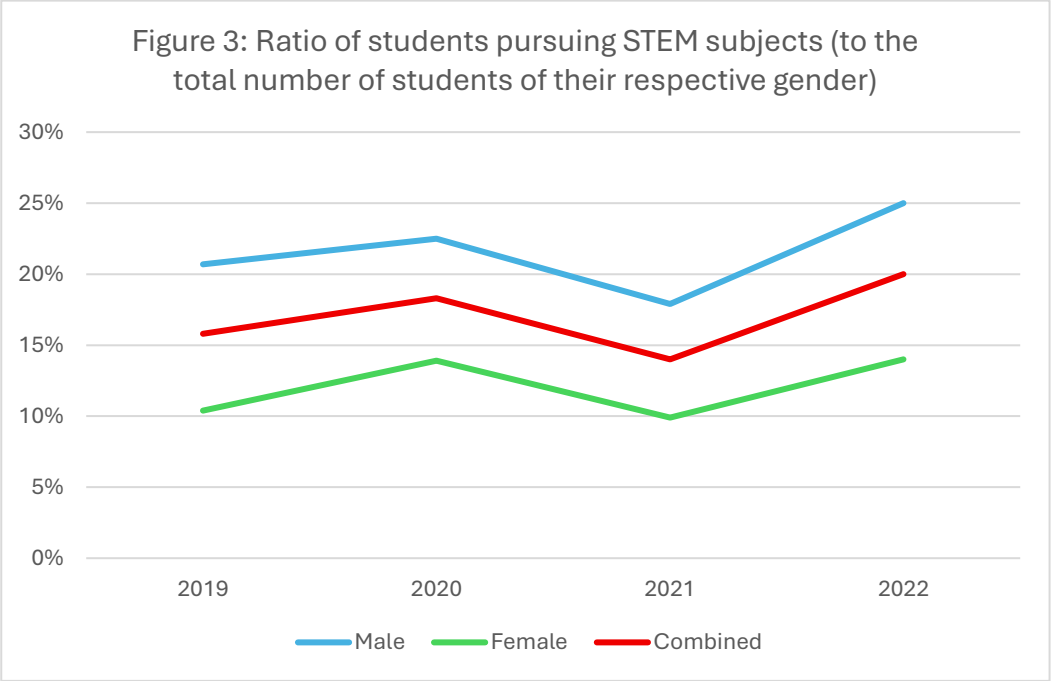


[11] Mutsvangwa, A. and Zezekwa, N. (2021). STEM education: A ray of hope for African countries. *Unnes Science Education Journal*, 10(2). DOI 10.15294/usej.v10i2.45746

[12] United Nations (2022). Policy Brief: STEM education and inequality in Africa. https://www.un.org/osaa/sites/www.un.org.osaa/files/un_brand_report_web_august_2020_v36928.pdf

Figure 3: Ratio of male and female students pursuing STEM subjects in universities, to the total number of students of their respective gender (2019 – 2022)

Source: Higher Education Authority



2.2. Data Collection

Data were collected from junior secondary school (Grade 9), senior secondary school (Grade 12), and university students (Final Year) using structured questionnaires. The survey covered both genders pursuing different subject choices. Electronic questionnaires were used to facilitate access. The survey was administered by a local researcher, supported by teaching staff in the selected schools.

Of the 836 completed questionnaires collected from two public universities and four STEM secondary schools in four different provinces of Zambia, a total, 540 were usable. The breakdown of the total 540 respondents by gender and educational stage is depicted in Table 1.

Table 1: Respondents by gender and educational stage

Education stage	Gender	Number	Age range	Internet access	Daily browse of online contents	Top 3 social media platform used
Junior Secondary (Grade 9)	Male	61	12-17	68%	79%	▪ Youtube (74%) ▪ Tiktok (69%) ▪ Whatsapp (67%)
	Female	78	12-17	58%	59%	▪ Tiktok (58%) ▪ Whatsapp (56%)

						▪ Snapchat (49%); and Youtube (49%)
	Total	**139**	**12-17**	**63%**	**68%**	
Senior Secondary (Grade 12)	Male	80	16-21	65%	81%	▪ Whatsapp (84%) ▪ Youtube (66%) ▪ Facebook (48%)
	Female	122	16-20	68%	79%	▪ Whatsapp (82%) ▪ TikTok (61%) ▪ Youtube (57%)
	Total	**202**	**16-21**	**67%**	**81%**	
University (Final Year)	Male	118	19-25	70%	97%	▪ Whatapps (92%) ▪ Facebook (74%) ▪ Youtube (64%)
	Female	81	19-25	79%	95%	▪ Whataspp (91%) ▪ Facebook (60%) ▪ Youtube (58%)
	Total	**199**	**19-25**	**74%**	**96%**	

This report presents findings from two questions on the survey about sources and channels of information for subject choices. They are:

1. ***Which information sources or channels were useful?***

2. ***Which sources or channels of information were approachable and accessible***?

The questionnaire for both Grade 9 and Grade 12 student respondents contains the same 12 items for both questions. For university students, the list contains the same 12 items plus one additional item: *Employers or Colleagues*.

These information sources or channels were adapted from Simoes and Soares (2010) and expanded for this study. The list comprises eight (8) interpersonal sources, categorised as follows:

- **Family members** (3 items): *Parents or Guardians*; *Siblings*; *Other Relatives*
- **Peers** (1 item): *Friends or Classmates*
- **Independent personnel** (5 items): *Teachers*; *Career Advisors*; *Tutors or Coaches*; *Senior Students or Alumni*, and *Employers or Colleagues* (this item applies only to university students)

In addition to interpersonal sources, the list includes four (4) third-party information platforms:

- **Physical forms** (2 items): *Printed Materials;* and *Information Talks or Events*
- **Digital forms** (2 items): *Social Media;* and *Online Information Websites*

For the first question on usefulness, respondents were asked to rate each source or channel using a 5-point Likert scale: *Very Useful* (5), *Useful* (4), *Not So Useful* (3), *Not Useful at All* (2), and *Never Use It* (1). The findings report the total percentage of students who rated each source or channel as either *Very Useful* (5) or *Useful* (4).

For the second question on approachability and accessibility, respondents rated the sources or channels using a 4-point Likert scale: *Very Approachable/ Accessible (4), Somewhat Approachable/ Accessible (3), Not So Approachable/ Accessible, and Not At All Approachable/ Accessible*. The findings report the total percentage of students who rated each source or channel as *Very Approachable/ Accessible* (4) or *Somewhat Approachable/ Accessible* (3).

3. Findings

3.1. What are the main sources of information for subject decisions? An Overview

A central aim of this study was to investigate the primary sources of information that shape students' subject and career choices in Zambia. Survey results indicated **parents or guardians** were consistently regarded as the most influential source of information by students at all the three educational levels, and across both genders (Figures 4, 5, and 6). **Teachers** also featured prominently, consistently rated among the top three most useful information sources.

While **printed materials** were found more useful than online information sources by students in secondary schools, university students rated them less favourably and showed a marked preference for **online information platforms** and **social media** instead. This shift may highlight the increasing role of digital media in shaping the decisions of older students, and/or barriers of access to digital device by younger students.

Interestingly, perception of the usefulness of **career advisor** is varied significantly between educational levels. Secondary school students rated career advisor among the least useful source of information, whereas university students considered them among the useful sources. A similar divergence was observed in the rating of **siblings**. While junior secondary students found them useful, university students - regardless of gender - considered them among the least useful sources[13].

Across all educational levels, **information talks and events, tutors or coaches, and extended family members**) were consistently not rated highly. The relatively low ranking of tutors or coaches was particularly surprising, especially at the university level, where students often spend substantial time with such personnel, almost comparable to the time spent with teachers.

Overall, survey results suggest that students increasingly draw upon a broader and more diverse range of information sources to inform their subject decisions as they progress through educational stages, from secondary to university. This trend is evident in the less concentrated reliance on a few dominant sources among senior secondary and university students, in contrast to the more narrowly focused preferences of junior secondary students.

[13] Employers and colleagues are included only in the questionnaire for university students.

Figure 4: Important information sources: Junior Secondary Students

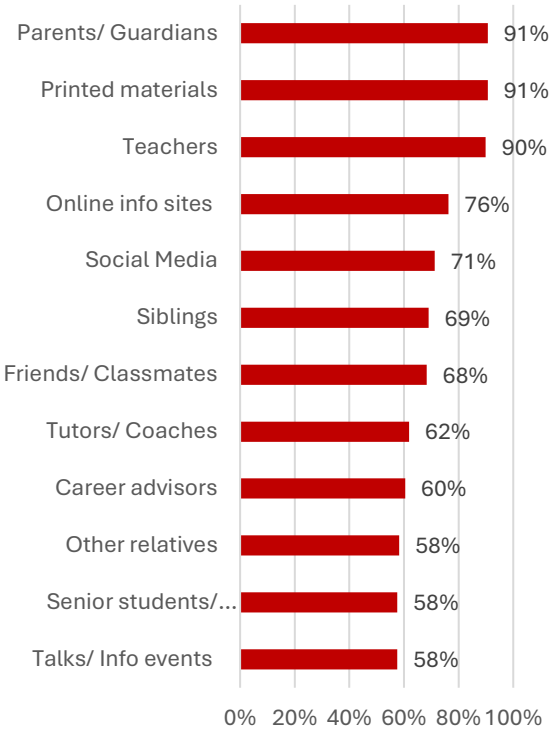


Figure 5: Important information sources: Senior secondary students

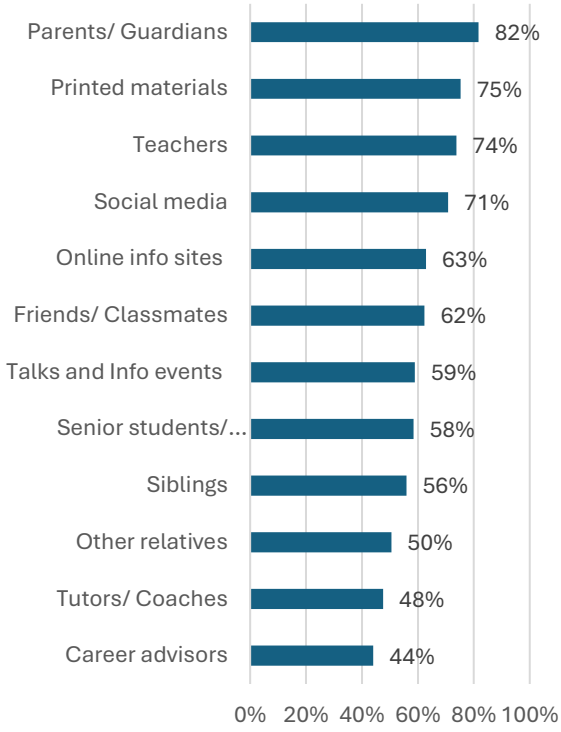
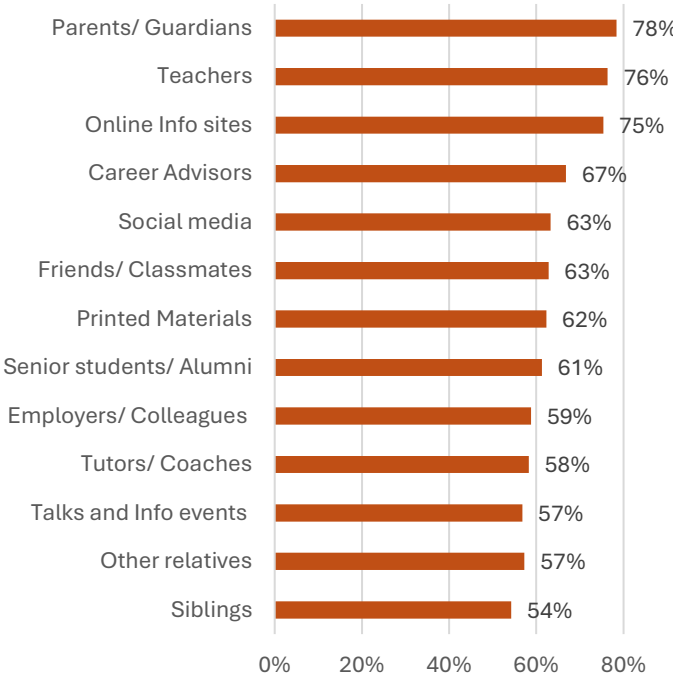


Figure 6: Important information sources: University students



on sources differ by gender at different

A deeper analysis of the survey results reveals notable gender differences in the perceived usefulness of information sources, with these perceptions evolving over time.

Girls generally rated most information sources more highly than boys. Both boys and girls consistently regarded **parents, guardians, and teachers** as highly valuable sources, but girls, particularly at the secondary school level, placed greater emphasis on teachers than boys (Figure 8). Girls also tended to value most 'interpersonal' sources—such as **siblings, career advisors, coaches, and tutors**—more than boys, across both junior and senior secondary levels (Figures 7 and 8). The exceptions were **other distant relatives, senior students and alumni**, who were considered more useful by girls at the secondary level and by boys at the university level (Figure 9).

Both genders recognised the utility of **online platforms** and **social media**, though university-level female students attributed notably greater importance to social media than their male peers. In contrast, social media was ranked 3rd place as the most useful information source by boys at senior secondary school but was ranked significantly lower by male students at university level. Similarly, **information talks and events** were valued more by female students than males, especially at the university level.

Figure 7: Important information sources by gender: Junior Secondary Students

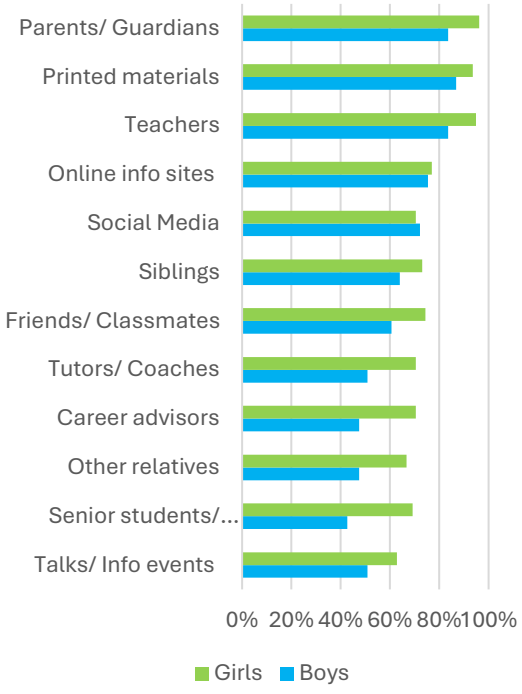


Figure 8: Important information sources: Senior secondary students

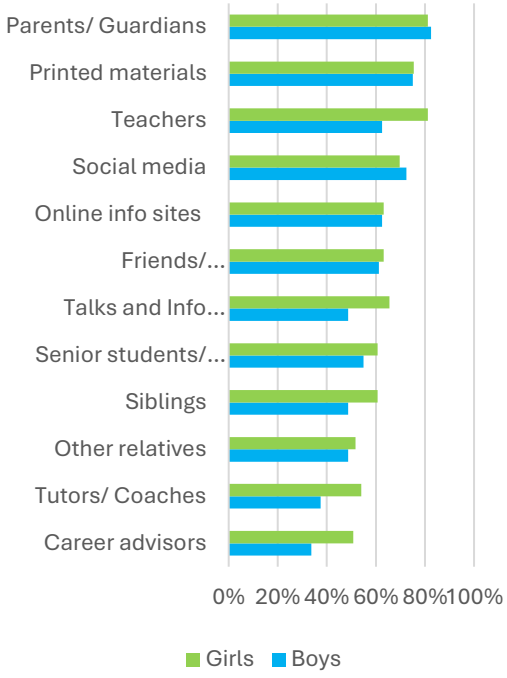


Figure 9: Important information sources by gender: University students

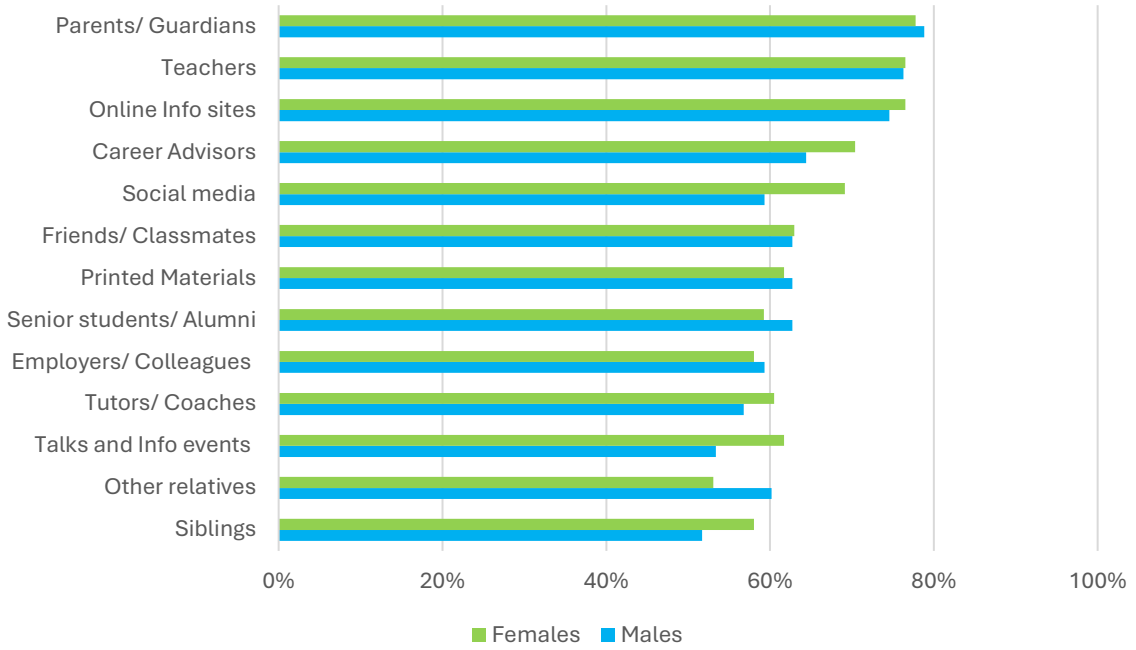


Figure 10: Boys' perception of usefulness of information sources by educational levels

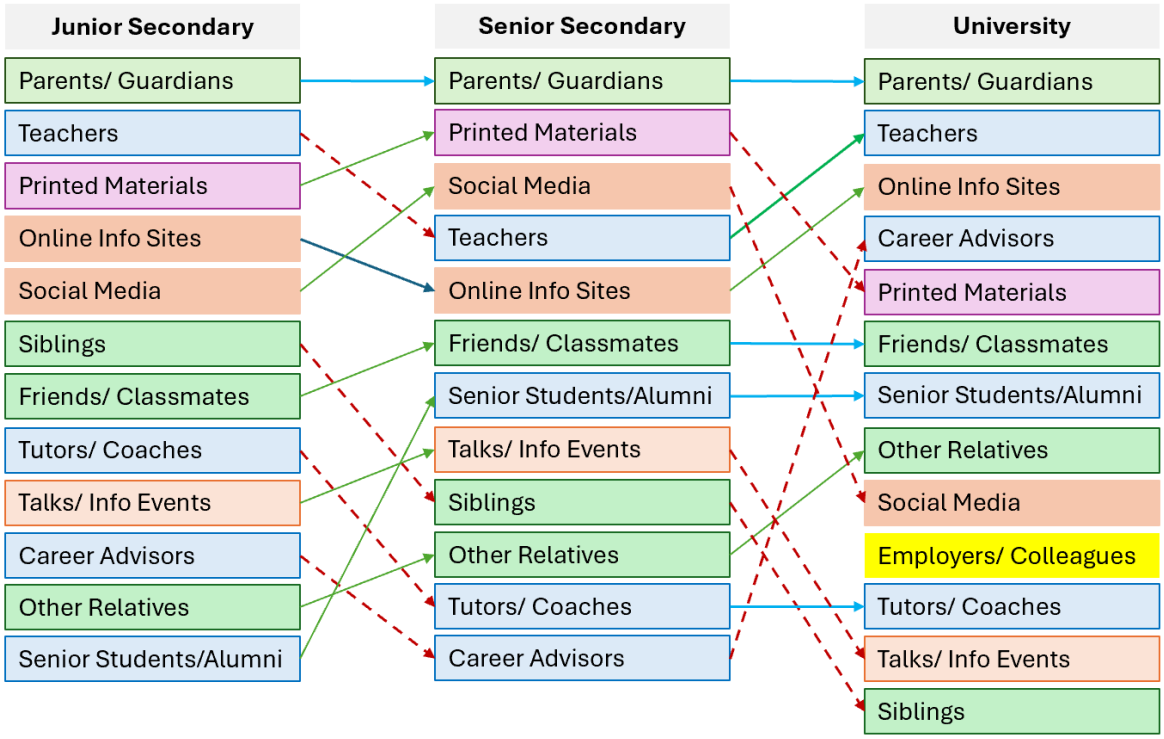
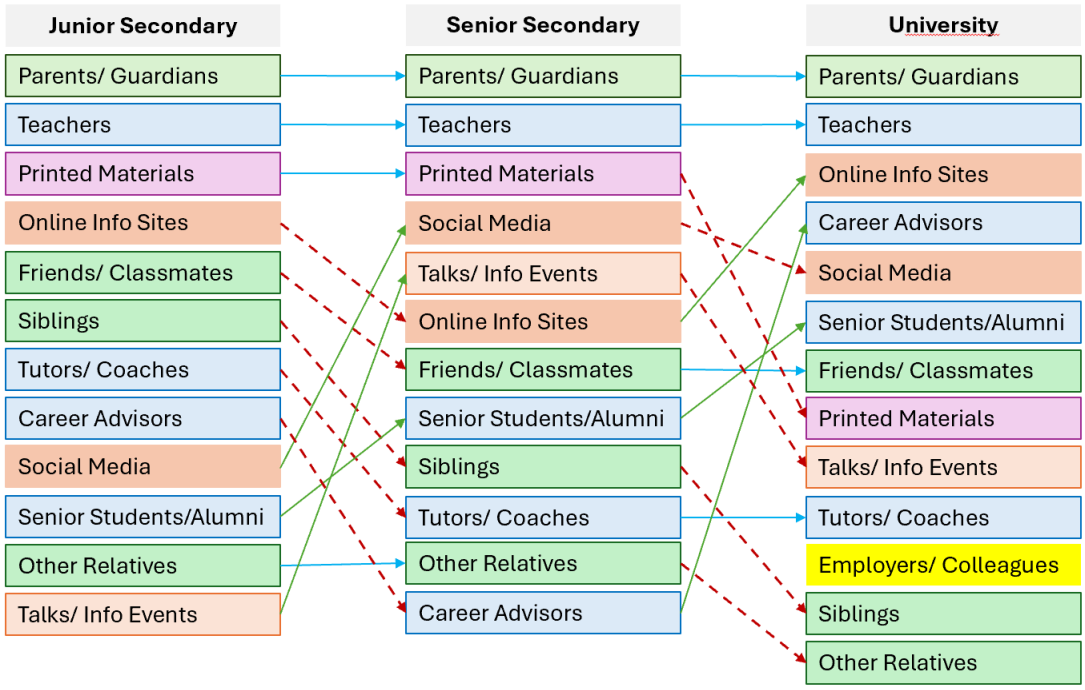


Figure 11: Girls' perception of usefulness of information sources by educational levels



Male students across all three educational levels consistently identified **parents or guardians** as the most useful source of information (Figure10). However, significant shifts were observed in the perceived usefulness of other sources. Notably, **career advisors** rose markedly in importance, from 12th place at the senior secondary level to 4th at the university level. Similarly, **online information platforms** increased in prominence, ranking 3rd among university students compared to 6th at the senior secondary level. In contrast, **printed materials**, while remaining within the top five, were valued more highly by senior secondary students than by university students. The most substantial declines were seen in **social media**, which dropped from 4th to 9th place, and **siblings**, falling from 6th at the junior secondary level to last at the university level.

Overall, the findings suggest that as male students transition to higher education, they adopt a more instrumental approach to information sourcing, favouring channels that offer specialised, contextualised, and supportive guidance for their subject decisions. This is reflected in their preference for a balanced mix of familial, peer, institutional, and digital sources.

Compared to their male counterparts, female students consistently valued **parents, guardians, and teachers** as top sources of information from junior secondary through to university (Figure 11)**.** Nonetheless, notable shifts occurred across educational levels. Like male students, female students increasingly valued **career advisors**, with their ranking rising from last place at the senior secondary level to 4th at the university level. However, unlike males, female university students placed greater emphasis on **online sources over printed materials**, despite the latter being highly valued in secondary school. **Online platforms** remained consistently important, ranking 3rd at the university level. Interestingly, **social media**—initially ranked 9th at the junior secondary level—rose into the top five by university, contrasting with the declining value male students placed on it. This finding diverges from research in African contexts, where men reportedly engage more

with social media and perceive it as more influential to their academic studies[14] [15] [16]. Meanwhile, **information talks and events** declined in perceived usefulness, dropping from 5th at the senior secondary level to 9th at university. Notably, the top four information sources among female university students mirrored those of their male peers, in identical order.

3.3. How does the perceived accessibility of information sources change across educational levels?

While a source of information may be reliable and valuable for informed decision-making, its impact is significantly diminished if it is not easily accessible. Across all three educational levels **parents, guardians, teachers, and online sources** were consistently rated as the most readily accessible sources of information (Figure 12).

However, a decline in the accessibility of certain key sources was observed at the university level compared to the secondary school levels. Notably, the proportion of students who considered **teachers** accessible decreased by more than 10 percentage points, from 91% at the junior secondary level to 87% at the university level. This decline is particularly concerning, given that teachers were consistently perceived as among the most useful and influential sources of information throughout students' educational journeys. The same trend was also observed in access to **tutors or coaches**, although the percentage decrease from junior secondary to university level was smaller than that of teachers. Similarly, access to **printed materials** dropped markedly, falling from 90% at the junior secondary level to 68% at the university level - a reduction of over 20 percentage points.

A comparable trend was seen in relation to **offline informational talks and events**, which were reported as accessible by only 60% of university students, down from 68% among junior secondary students. Surprisingly, even **online information sources**, especially **social media** platforms were perceived as less accessible by university students than by their senior secondary counterparts.

Conversely, certain sources such as **career advisors, senior students, and alumni** were viewed as more accessible by university students than by those in secondary school. Nonetheless, these sources were still not ranked among the most accessible overall, with only about two-thirds of university respondents reporting them as accessible. This level of accessibility was comparable to that reported for **employers and colleagues**. This suggests that, despite their potential to offer highly specialised and practical advice, these sources may remain underutilised as primary channels of information due to limited accessibility.

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[14] Patrick, J. and Umaru, R. (2021). Influence of social media on senior secondary school students' achievement in civic education in Jos South, Plateau State. *Journal of African Social Studies*, 2(2), pp.138-149.
[15] Ogundele, O.E. et al. (2023). Gender variations in social media usage and its perceived impact on academic performance of Nigeria science undergraduates. *Journal of Science and Mathematics Letter*, 11(2), pp.48-56. DOI:10.37134/jsml.vol11.2.6.2023
[16] Leube, D. et al. (2019). Use of social media among undergraduate students: a cross sectional study of University of Botswana students. *International Research Journal of Social Sciences*, 8(3), pp.1-10. https://www.isca.me/IJSS/Archive/v8/i3/1.ISCA-IRJSS-2018-109.pdf

Figure 12: The perceived accessibility of sources of information by educational level

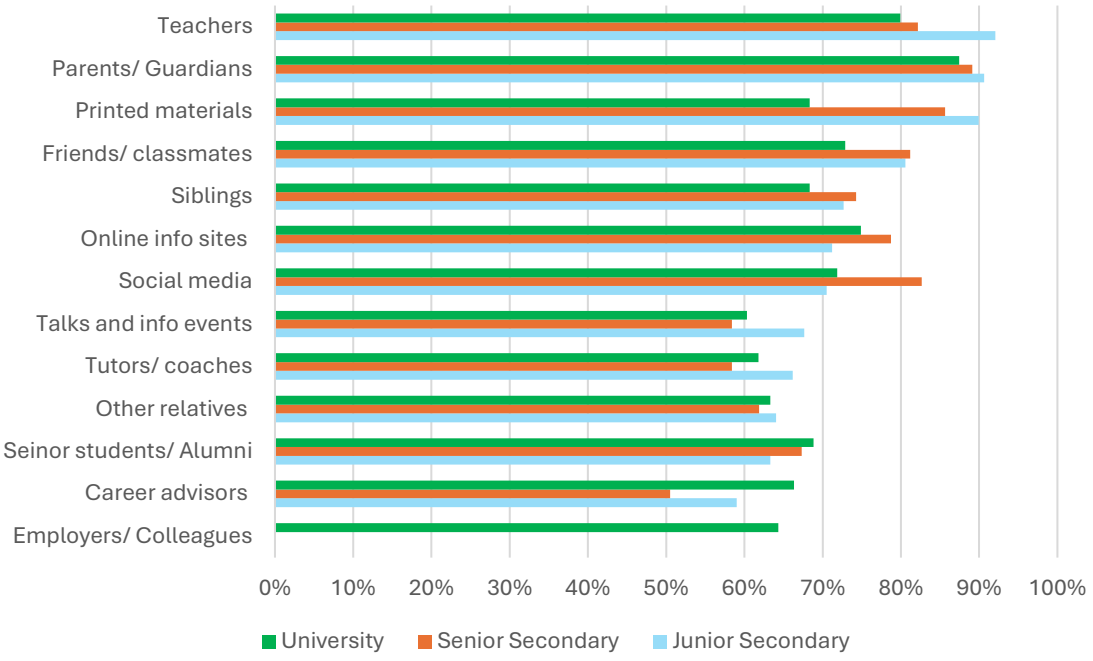


Figure 13: The perceived accessibility of sources of information by educational level - Male students

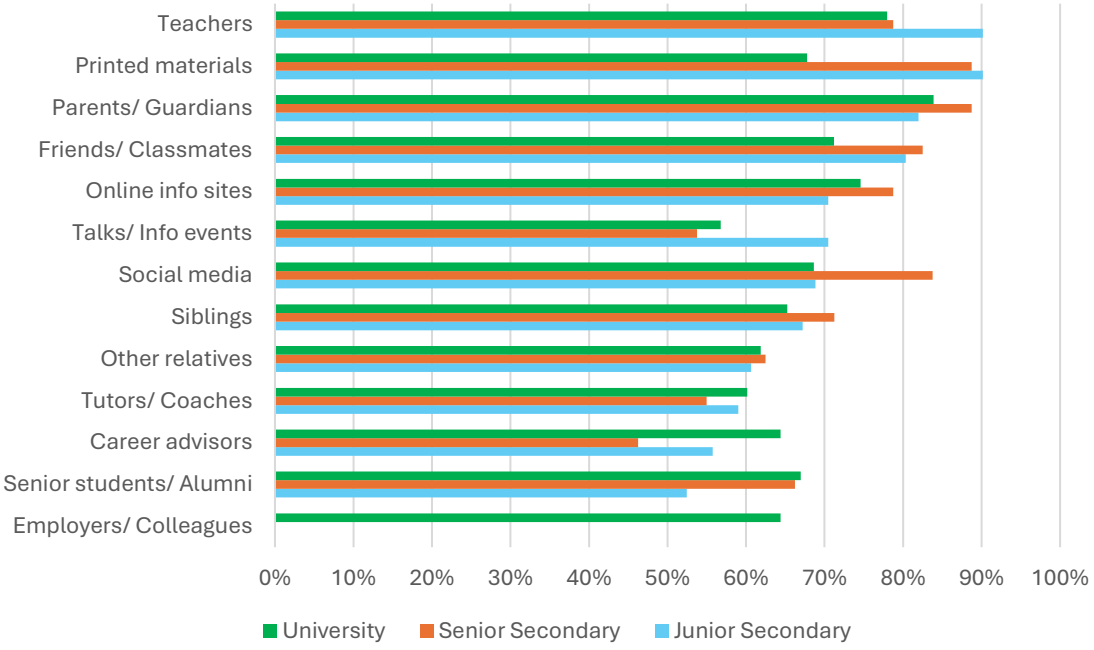
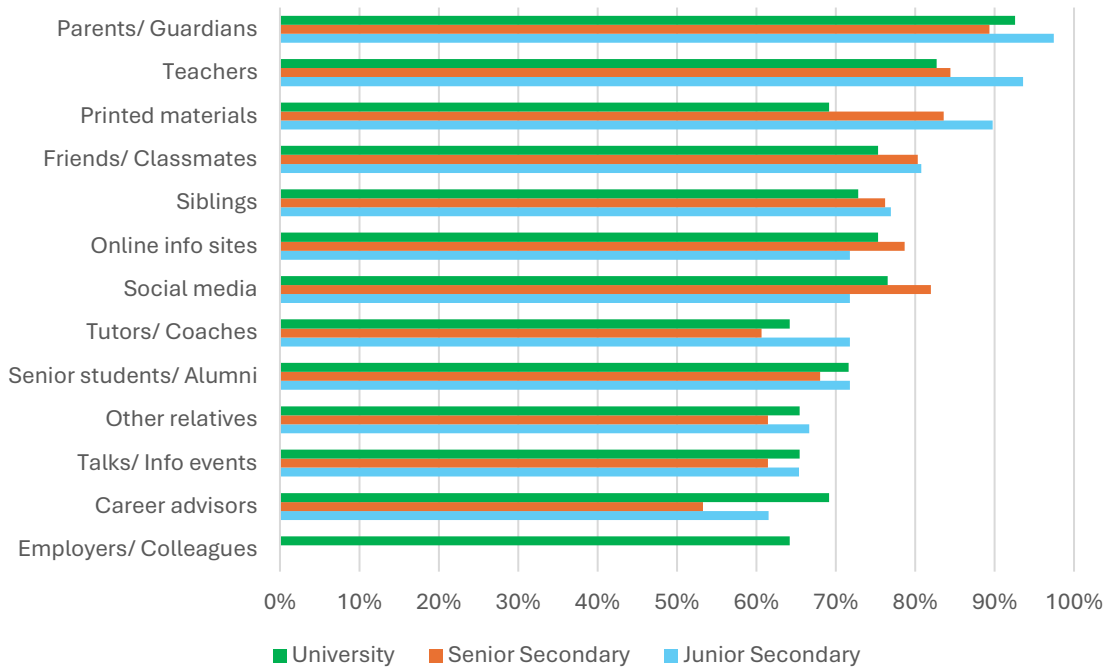


Figure 14: The perceived accessibility of sources of information by educational level - Female students



Notable gender differences emerged in the perceived accessibility of information sources across all educational levels (Figures 13 and 14). Overall, female students consistently rated most sources, particularly **'interpersonal sources' such as parents, guardians, siblings, teachers, senior students or alumni, and career advisors** as more accessible than their male counterparts, especially at the junior secondary and university levels. Exceptions to this trend included **distant relatives, friends and classmates**, where gender differences were minimal. At the junior secondary level, 10% more female students reported **tutors and coaches** as accessible compared to male students, although this gap narrowed to 4% at the university level.

Interestingly, more male students at the senior secondary level found **parents or guardians** accessible than at the junior secondary and university levels (Figure 15). The opposite trend was observed among female students, with fewer reporting **parents or guardians** as accessible sources at the senior secondary stage (Figure 16).

Regarding digital sources, male and female students reported similar levels of access to **online information websites** across all educational levels. However, significantly more female students, particularly at the junior secondary and university levels reported access to **social media platforms**. At the university level, 77% of female students considered social media accessible, compared to only 69% of male students. This is surprising as the percentage of male university students (97%) that reported to have daily access to online content was higher than the percentage of female students (see Table 1 in section 2.2). The finding also contrasts with previous studies in the African context, which suggested that men typically have greater access to online social networking platforms.

Notably, fewer male university students perceived **social media** as accessible compared to **online information websites**, with a gap of six percentage points. This is unexpected, given that social media platforms often benefit from subsidised or free data access. Despite this cost

advantage, social media was not consistently rated as more accessible than printed materials across educational levels. Among male university students, the proportion who considered social media accessible exceeded that for printed materials by only one percentage point, challenging common assumptions about the superior accessibility of digital platforms.

Accessibility ratings for **printed materials** were consistent across genders and exhibited a similar decline across educational levels. In contrast, male students reported a notable 10-percentage-point drop in the perceived accessibility of **information talks and events** from junior secondary to university level, while female students' ratings remained relatively stable. At the university level, 65% of female students found such events accessible, compared to only 57% of males. This disparity suggests that these events may not effectively target male students or be perceived by them as less beneficial, potentially contributing to their lower attendance and participation.

Figure 15: Change in accessibility ratings of information sources by male students across educational levels.

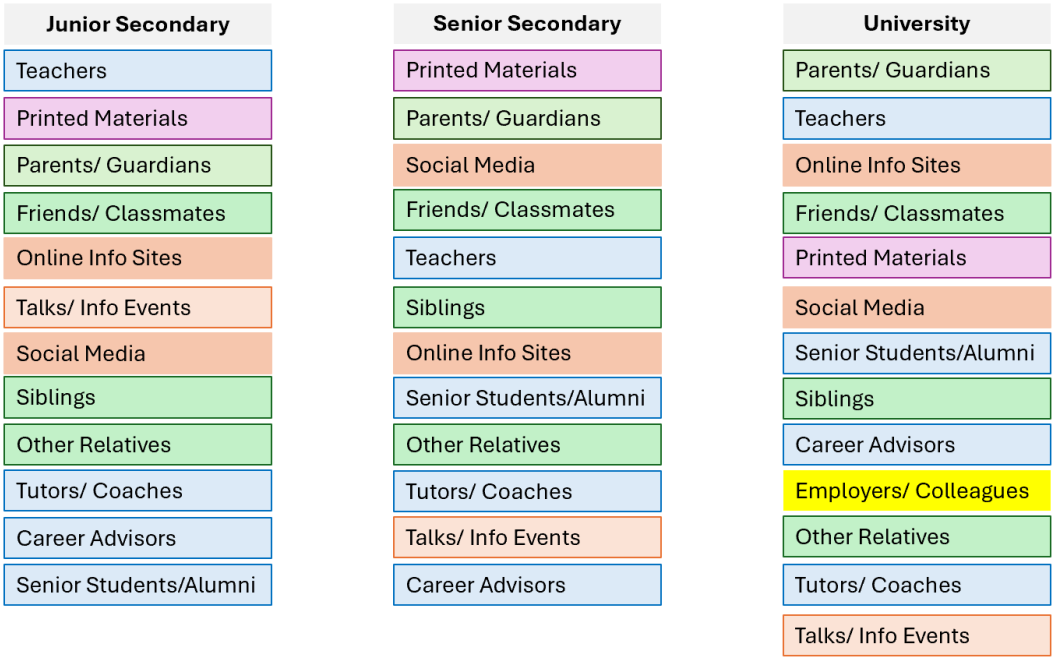
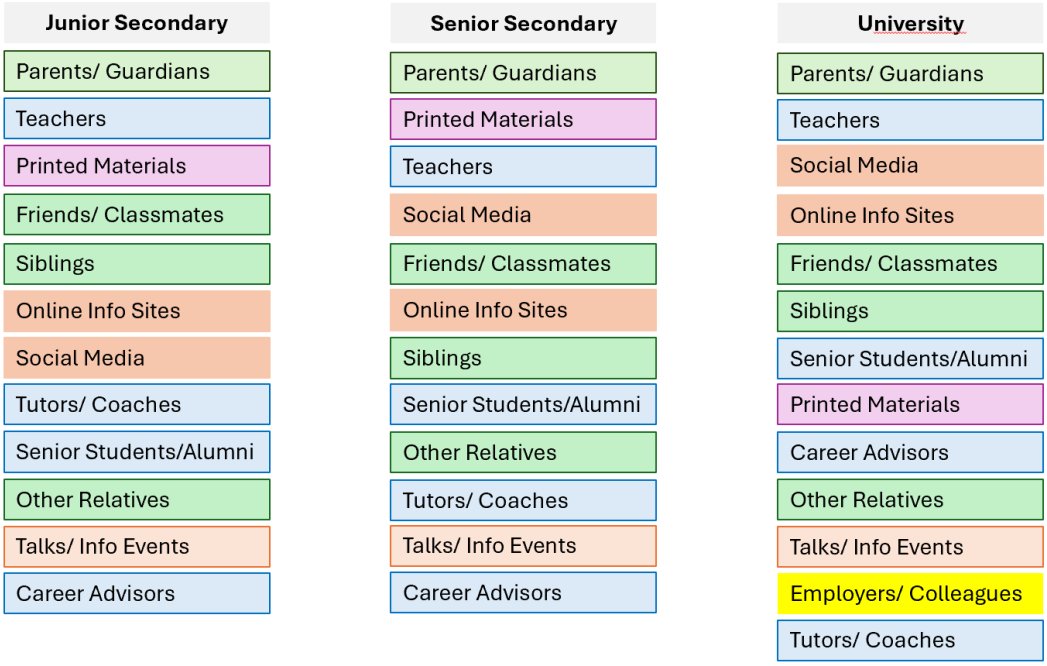


Figure 16: Change in accessibility ratings of information sources by female students across educational levels.



4. Key Insights from Findings

- **Source of useful information differ by educational stages and gender**

The findings demonstrate that students' information-seeking behaviours and preferred sources changes significantly across educational stages, challenging the static views common in existing research. Recognising these developmental dynamics is crucial for understanding students' specific information needs and use, and how these shape their subject choices at different educational levels. Additionally, pronounced gender differences in information use, particularly at the secondary school level, are evident. This underscores the need for gender-sensitive strategies to ensure availability, accessibility and affordability of high-quality information across diverse information channels and platforms.

Consequently, policies and support measures must be tailored to students' evolving information needs, cognitive abilities and the distinct challenges that they face at each educational stage. Policymakers and educators should move beyond generic, one-size-fits-all approaches; instead, adopt gender sensitive strategies that can appreciate and address specific preferences and barriers more effectively. Such tailored interventions are essential for promoting equitable access to information and empowering all students to make independent, informed and evidence-based subject decisions.

- **Parental engagement in students' subject selection and education planning**

The influence of parents or guardians in shaping students' educational and career decisions is undeniably significant [17] [18] [19]. Despite the growing prominence of alternative sources of information, parents remain consistently regarded as one of the most valuable and approachable resources for guidance. While parents are typically caring, trusted, and well-intentioned, they may not always possess the most up-to-date and accurate information necessary to support their children's aspirations effectively. Furthermore, their own personal experiences, preferences, and perceptions can unintentionally introduce biases or reinforce stereotypes, which may hinder their ability to offer objective, evidence-based advice that match their children's abilities and interests. Such biases may inadvertently cloud their children's decision-making, potentially limiting their ability to make fully informed choices.

Parental support in students' educational decision-making, such as subject selection, can be strengthened through targeted initiatives. Policymakers and educators should prioritise providing parents with comprehensive, evidence-based, and current information on educational and career pathways. Facilitating effective communication between parents and educators via dedicated channels ensures both parties remain informed about students' aspirations, progress, and challenges, enabling more responsive guidance. Regular workshops and training sessions can further equip parents with the necessary knowledge and skills for effective communication and advice. Additionally, fostering peer-to-peer parent networks encourages the exchange of experiences and strategies, helping to reduce stereotypes, promote inclusivity, and empower parents in supporting their children's choices.

- **Closing the gap between information value and accessibility**

Identifying trustworthy and relevant information is a crucial initial step in making informed educational decisions. However, significant barriers often arise from limited availability and accessibility of such information. There is a notable disconnection between the perceived usefulness of various information sources and their actual ease of access, as evident in our findings of the relatively limited access to social media by boys, and to online information sites by girls in junior secondary schools; to online information sites, and information talks and events by both genders at senior secondary school level; and to career advisors at both senior secondary school and university levels.

Cultural norms, societal stereotypes, and religious beliefs can further constrain access to critical information, including in Africa. Gender-based expectations may discourage boys and girls from engaging with peers, relatives, or teachers of the opposite sex, and in some case, actively discourage or prohibit mixed-gender events. These practices, intentional or unintentional, impede

[17] van der Vleuten, M. et al. (2018). Intergenerational transmission of gender segregation: How parents' occupational field affects gender differences in field of study choices. *British Educational Research Journal*, 44 (2), pp. 294-318. 10.1002/berj.3329

[18] Tao, H-L and Cheng, H-P. (2022). Parental and sibling influence on study field choice: Gender-stereotypical or field preference transmission. *Journal of Asian Economics*, 82, 101509. https://doi.org/10.1016/j.asieco.2022.101509

[19] Ochonogor, V. and Seroto, J. (2021). The Influence of Home Factors and Parental Characteristics on Learners' Career Choices in a South African Secondary School. *Africa Education Review,* 18(5-6), pp.113-130. https://doi.org/10.1080/18146627.2022.2157741

open dialogue and limit equitable access to valuable educational information and support, thereby hindering students' ability to make fully informed decisions.

To enhance access to critical information for educational decision-making, a multifaceted strategy is essential. Policymakers and educators should invest in the development of open, accessible, user-friendly, and affordable digital platforms and events that provide credible, current, and reliable information in an accessible and inclusive manner. Upskilling teachers, career advisors, and community leaders to serve as effective communicators and advisors, supported by adequate resources, can improve the quality of guidance and foster greater trust and engagement among students. Targeted outreach programmes can engage communities with limited digital connectivity and facilitate partnerships with parent groups on new and emerging trends, and broader stakeholders to address cultural biases and stereotypes that may hinder information access and use. Additionally, promoting peer-to-peer networks among students and parents will broaden perspectives, strengthen resilience, and encourage the exchange of experiences and good practices, ultimately creating a self-sustaining, supportive environment.

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