

## Motivation and multilingual identity in Maltese adolescents: An investigation through structural equation modelling

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### ABSTRACT

**EN** This study investigates the psychological and contextual factors shaping multilingual identity among Maltese adolescents. Malta is a bilingual nation undergoing rapid linguistic diversification due to significant demographic shifts. Using the L2 Motivational Self System and post-structural theories of identity, the study examines how socio-cognitive beliefs, language attitudes, and instrumental values shape motivation and, ultimately, multilingual identity. Data were collected from 402 secondary school students through a validated online questionnaire. Structural Equation Modelling (SEM) was used to assess direct and mediated relationships between latent constructs. It demonstrated a good overall fit and identified motivation as the strongest predictor of multilingual identity, explaining 48% of its variance. Instrumental value beliefs also influenced identity directly, indicating a dual pathway. Small but significant effects were found for classroom multilingual context and gender. Findings highlight the importance of future-oriented motivation and support language policies that integrate practical and humanistic approaches to multilingualism.

**Key words:** MULTILINGUAL IDENTITY, MOTIVATIONAL SELF SYSTEM, ADOLESCENT MOTIVATION

**ES** Este estudio analiza los factores psicológicos y contextuales que determinan la identidad multilingüe entre los adolescentes malteses. Malta es un país bilingüe que está experimentando una rápida diversificación lingüística debido a importantes cambios demográficos. A partir del "Sistema Motivacional del Yo en la L2" y de las teorías posestructuralistas de la identidad, el estudio examina cómo las creencias sociocognitivas, las actitudes lingüísticas y los valores instrumentales determinan la motivación y, en última instancia, la identidad multilingüe. Se recopiló información de 402 estudiantes de secundaria mediante un cuestionario validado en línea. Se utilizó el *Modelo de Ecuaciones Estructurales* (SEM) para evaluar las relaciones directas y mediadas entre los constructos latentes. El modelo demostró un buen ajuste general e identificó la motivación como el predictor más fuerte de la identidad multilingüe, explicando el 48% de su varianza. Las creencias sobre los valores instrumentales también influyeron directamente en la identidad, lo que indica una doble vía. Se observaron efectos pequeños pero significativos en relación con el contexto multilingüe en el aula y el género. Los resultados ponen de relieve la importancia de la motivación orientada al futuro y respaldan las políticas lingüísticas que integran enfoques prácticos y humanísticos del multilingüismo.

**Palabras clave:** IDENTIDAD MULTILINGÜE, SISTEMA MOTIVACIONAL DEL YO, MOTIVACIÓN EN LA ADOLESCENCIA

**IT** Questo studio indaga i fattori psicologici e contestuali che contribuiscono alla costruzione dell'identità multilingue tra gli adolescenti maltesi. Malta è una nazione bilingue che sta attraversando una rapida diversificazione linguistica dovuta a significativi cambiamenti demografici. Basandosi sul modello del *L2 Motivational Self System* e sulle teorie post-strutturaliste dell'identità, lo studio esamina in che modo le credenze socio-cognitive, gli atteggiamenti linguistici e i valori strumentali influenzino la motivazione e l'identità multilingue. I dati sono stati raccolti tramite un questionario online validato, somministrato a 402 studenti della scuola secondaria. Per analizzare le relazioni dirette e mediate tra i costrutti latenti è stato usato lo *Structural Equation Modelling*, SEM. Il modello ha mostrato un buon adattamento complessivo ai dati e ha identificato la motivazione come il più forte predittore dell'identità multilingue, spiegandone il 48% della varianza. Le credenze relative al valore strumentale hanno inoltre influenzato direttamente l'identità, evidenziando l'esistenza di un duplice percorso di influenza. Sono emersi anche effetti modesti ma statisticamente significativi del contesto scolastico multilingue e del genere. I risultati sottolineano l'importanza di una motivazione orientata al futuro e sostengono politiche linguistiche che integrino approcci pratici e umanistici al multilinguismo.

**Parole chiave:** IDENTITÀ MULTILINGUE, SISTEMA MOTIVAZIONALE DEL SÈ, MOTIVAZIONE NEGLI ADOLESCENTI

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## 1. Introduction

The interplay among multilingualism, language-learning motivation, and identity has gained increasing prominence in applied linguistics, particularly as learners navigate educational spaces shaped by diverse linguistic and cultural repertoires. Early research on second language motivation and identity was largely situated in monolingual or bilingual contexts, while contemporary multilingual environments require more complex theoretical models that can account for how learners internalise, negotiate, and express their linguistic identities within dynamic social and institutional settings (Fisher, Evans & Forbes, 2025; Henry, 2023). These developments highlight the need for empirical work that integrates psychological, sociocultural, and contextual dimensions of multilingual identity formation.

While multilingualism has characterised smaller bilingual nations for a long time, rapid demographic and educational shifts, such as increased mobility, migration, and diversification of school populations, have further intensified the complexity of learners' linguistic ecologies. For instance, Malta, an officially bilingual country, has experienced significant multilingual diversification in recent years (Panzavecchia, 2024).

In Malta, this shift is now well documented in local educational research. Recent studies show that Maltese classrooms are no longer adequately described as simply bilingual but are increasingly shaped by wider linguistic and cultural diversity (Camenzuli, Lundberg, & Gauci, 2023; Panzavecchia, 2024). Research with Maltese primary educators indicates that teachers generally hold positive views towards multilingualism yet often remain uncertain about how to draw on it pedagogically in absence of clearer guidance, stronger training, and more coherent language policy support (Camenzuli et al., 2023; Panzavecchia, 2024). At the same time, recent work with Maltese adolescents suggests that young people adapt their language use across home, school, and online settings, and tend to view multilingualism more as a practical resource than as an identity issue (Muscat & Panzavecchia, 2025). Taken together, these findings suggest that multilingual identity and motivation in Malta must be understood within a rapidly changing local ecology in which long-standing bilingual traditions now intersect with newer forms of multilingual experience. In these contexts, learners do more than use multiple languages: they construct identities shaped by their linguistic repertoires and the meanings attached to them. Understanding how adolescents navigate such evolving linguistic landscapes is therefore both theoretically significant and timely.

Traditional approaches to second language learning tended to conceptualise motivation and identity through linear cognitive models. These views are increasingly challenged by research emphasising the relational, affective, and sociocultural dimensions of language learning (Dörnyei, 2009; Norton, 2013; Ushioda, 2011). Learners' beliefs, attitudes, and social positioning are now seen as critical mediators of investment and identity construction. Furthermore, identity is negotiated within layered systems of social status, peer interaction, and institutional messaging, all of which influence learners' engagement and sense of self (Ceuleers, 2008; Wang et al., 2021).

Despite conceptual and theoretical advances, quantitative studies that integrate psychological and sociocultural variables in multilingual school settings remain limited. This gap is particularly evident in emerging multilingual contexts such as Malta. The present study contributes to this field by examining how students' socio-cognitive beliefs, language attitudes, peer interaction, and motivation shape the development of multilingual identity in adolescence. By modelling both direct and indirect relationships among these dimensions, the study also offers insights into contextually situated identity processes within multilingual education.

## 2. Literature review and theoretical framework

### 2.1. *Language attitudes and socio-cognitive beliefs*

Language attitudes have long been central to motivation research, influencing learners' willingness to engage with particular languages and their associated cultural communities (Ceuleers, 2008; Thompson, 2017). Positive emotional orientations toward a language tend to predict greater persistence and investment, whereas negative attitudes or perceived stigma can obstruct identity alignment and engagement (Dewaele, 2013). In multilingual contexts, attitudes toward different languages within a repertoire carry distinct symbolic and social meanings, shaping how learners position themselves linguistically and which languages they incorporate into their identities.

Socio-cognitive beliefs, such as perceived competence, creativity, and metacognitive efficacy in multilingual settings, further contribute to how learners conceptualise their linguistic potential. Learners who believe that multilingualism enhances cognitive or academic outcomes tend to construct more agentic

multilingual identities (Zareian & Jodaei, 2015). These beliefs are dynamic and evolve through interaction, institutional ideologies, and peer influence. Fisher et al. (2025), for example, argue that classrooms act as “identity laboratories” where learners explore, articulate, and negotiate their linguistic selves.

## **2.2. Motivation and the L2 motivational self-system**

Motivation is widely recognised as a bridge between learners’ beliefs, attitudes, and identity trajectories. Early perspectives such as Gardner’s socio-educational model (1985) highlighted the role of integrative and instrumental orientations but this framework has been critiqued for its limited attention to identity dynamics and its assumption of stable attitudinal constructs. More recent models emphasise the fluidity of motivation and its alignment with broader identity processes.

Dörnyei’s (2009) L2 Motivational Self System reframes motivation in terms of self-guides: the Ideal L2 Self, the Ought-to Self, and the Learning Experience. This model has been influential in theorising the affective and aspirational dimensions of language learning. In multilingual settings, learners often develop multiple language-linked “selves,” enabling the conceptualisation of an Ideal Multilingual Self (Henry, 2017; Thompson, 2017; Wang, McConachy & Ushioda, 2021).

Adolescence is a critical period in which these self-guides become more emotionally resonant and behaviourally consequential (Ryan & Deci, 2003). The extent to which school cultures and peer groups affirm or constrain multilingual identities influences the developmental trajectories of motivation. Recent research further highlights the role of perseverance and internalised agency in sustaining the development of multilingual identity (Göksu & Louis, 2025). In contexts where certain languages function as forms of social or economic capital, learners may internalise instrumental value beliefs (IVBs) (i.e., learners’ perceptions of the practical and future-oriented utility of language learning) as part of their identity negotiation, as seen in Ceuleers’ (2008) study of Brussels adolescents.

## **2.3. Defining multilingual identity**

Multilingual identity refers to a self-concept shaped through one’s affective, ideological, and communicative relationships with multiple languages (Block, 2006; Wang et al., 2021). It extends beyond the number of languages a learner knows and encompasses how individuals position themselves within multilingual environments. Fisher et al. (2025) distinguish between linguistic identity (language-specific positioning) and multilingual identity (a holistic identification as a multilingual person).

Psychological perspectives view multilingual identity as the integration of multiple language-linked selves into a coherent identity structure (Erikson, 1968; Oyserman & James, 2011). Sociocultural approaches emphasise identity as being co-constructed through discourse, power dynamics, and participation in communities of practice (Karimi & Mofidi, 2019; Norton, 2013). Within these frameworks, identity is relational, fluid, and continually reshaped through experiences and interaction (Ushioda, 2011).

Identity is not simply acquired through exposure; learners actively negotiate, resist, or transform their multilingual selves (Fisher et al., 2025). Longitudinal perspectives, such as Henry’s (2023) narrative-based models of persistence, show how dynamic shifts in learners’ imagined multilingual futures impact their motivation. Likewise, multimodal and translanguaging practices create hybrid linguistic spaces that enable flexible identity work (Almashour, 2024). In Malta, for example, translanguaging is deeply embedded in everyday communication and speakers fluidly draw on Maltese, English, and other languages in ways that blur the boundaries between named languages. This linguistic ecology provides a fertile context for examining how multilingual identity is constructed and negotiated.

## **3. Rationale for the present study**

This local body of research is particularly important for the present study, as it demonstrates that multilingualism in Malta is not merely a demographic trend but a lived educational reality. Classroom-based studies show that flexible bilingual and multilingual practices already form part of everyday teaching and learning, even if these practices are not always systematically supported or consistently implemented (Farrugia, 2022; Panzavecchia, 2024; Panzavecchia & Little, 2020). In this context, learners’ motivation, language attitudes, and multilingual identities are shaped not only by general socio-cognitive processes, but also by the specific tensions of a system in transition, one in which Maltese–English bilingualism remains historically central, while increasingly diverse linguistic repertoires are becoming more visible in classrooms and peer interaction (Camenzuli, Lundberg, & Gauci, 2023; Muscat & Panzavecchia, 2025).

The present study integrates these theoretical perspectives by modelling the relationships among socio-cognitive beliefs, language attitudes, instrumental values, peer interactions, and motivation in predicting multilingual identity. Using structural equation modelling (SEM), it explores both direct and mediated pathways that influence multilingual identity development in adolescence. This method responds to the need for quantitative research that captures the psychological and sociocultural processes shaping identity within multilingual educational settings. By focusing on Malta's multilingual environment, the study also advances applied linguistics by connecting learners' psychological orientations to their everyday language practices, identity positioning, and participation in linguistically diverse classrooms. The following research questions guide the study:

- 1) To what extent do motivational, attitudinal, and socio-cognitive variables predict adolescents' multilingual identity?
- 2) What are the antecedents of Motivation to maintain or develop a multilingual identity?
- 3) Do contextual factors (e.g., gender, classroom multilingual context) significantly influence multilingual identity?

#### 4. Method

The research questions are tested using a structural equation model that estimates both direct and indirect pathways between constructs. This approach investigates whether instrumental value beliefs, hereafter referred to as IVBs, shape identity. By integrating contextual variables such as peer interaction, classroom multilingualism, and gender, the study advances a multi-theoretical account of adolescent multilingual identity development. It is important to note that the school sector and other demographic variables are examined in detail in a parallel study (Muscat & Panzavecchia, 2025), which focuses on descriptive and group-level analyses. The present study builds on this work by modelling structural relationships between psychological constructs.

#### 5. Participants

This study draws on data from a sample of 402 secondary school students in Malta, aged 10 to 14 years, enrolled in Years 7 to 9. The sample included a relatively balanced gender distribution (approximately 55% female and 45% male) and can be broadly characterised as bilingual or multilingual, reflecting the Maltese linguistic context. Participants were recruited from diverse school sectors, including state, church, and private independent institutions; however, the distribution across sectors was uneven, with church (47%) and independent schools (33.8%) being overrepresented, and state schools underrepresented (19.2%). Participation was voluntary and data were collected through an anonymous online questionnaire administered in school settings with the support of educators. Full descriptive statistics and detailed sample breakdowns are reported in Muscat & Panzavecchia (2025).

The uneven distribution across sectors reflects participation patterns rather than intentional sampling. Consequently, findings related to the school sector should be interpreted with caution, particularly when comparing subgroups. While the school sector represents a potentially meaningful contextual variable, the present study primarily focused on socio-cognitive and motivational predictors of multilingual identity rather than institutional differences. As such, the school sector was not included in the final structural model, and its role in shaping group-level differences is addressed as a consideration for future research.

#### 6. Measures and instrument reliability

Data were collected using a researcher-developed online questionnaire designed to explore students' language backgrounds, everyday language practices (home, school, online), emotional associations with their first and second languages, and perspectives on multilingualism in contemporary education and society (see Appendix 1). The questionnaire included a combination of Likert-scale items, multiple-choice questions, and open-ended prompts. Before distribution, the instrument was assessed for face validity by two independent researchers, resulting in minor revisions to two items to enhance clarity and alignment with the study's aims.

Internal consistency of the six-item Likert scale assessing attitudes toward multilingualism was evaluated using *McDonald's Omega* ( $\omega$ ), which does not assume tau-equivalence and is thus more robust than Cronbach's Alpha in this context. The analysis yielded  $\omega = 0.72$ , indicating acceptable reliability. A Split-Half Reliability test further showed a *Spearman-Brown* corrected coefficient of  $0.50$ , suggesting moderate internal

consistency. While the latter falls below the conventional 0.70 benchmark, the *Omega* result supports the scale's adequacy for measuring attitudes in this domain.

It is noted that this reliability estimate pertains specifically to the six-item scale with a 5-point response format. Other belief items, such as those related to language and identity or future aspirations, used a 3-point response format and were analysed descriptively. These were not included in the internal consistency analysis. Full methodological details are discussed in a parallel study (Muscat & Panzavecchia, 2025).

## 7. Analytical procedure

To examine predictors of Multilingual Identity (MI) among Maltese adolescents, we specified and tested a SEM using latent constructs deriving from questionnaire responses. The model was designed to estimate both direct and indirect pathways linking socio-cognitive beliefs, language attitudes, and motivational orientations to multilingual identity.

The measurement model included five latent constructs. Each construct was operationalised using conceptually aligned items from the questionnaire (see Appendix). Specifically, socio-cognitive beliefs (SC) were derived from items assessing perceived cognitive, academic, and social benefits of multilingualism (Q13); language attitudes (L1 and L2) were captured through affective and evaluative orientations toward each language, including feelings of pride, perceived competence, and the importance attributed to using the language, consistent with attitudinal frameworks in second language acquisition (e.g., Gardner, 1985), instrumental value beliefs (IVBs) were measured through items reflecting the perceived academic, social, and future-oriented utility of language learning (Q14); and motivation (MOT) was indicated by items capturing future-oriented aspirations, particularly students' imagined multilingual selves (Q14).

Multilingual identity (MI) was modelled as a latent outcome variable, reflected by two observed indicators capturing (a) the perceived importance of multilingualism and (b) the extent to which students identified themselves as multilingual in their imagined future. This operationalisation aligns with theoretical perspectives that conceptualise identity as both a value-based orientation and a future-oriented self-concept.

### 7.1. Confirmatory factor analysis

A confirmatory factor analysis (CFA) was conducted before the SEM estimation to validate the latent constructs. Given the ordinal nature of the Likert-scale items and the presence of binary indicators, we employed robust weighted least squares estimation with mean and variance adjustment. This estimation method is recommended for categorical data, as it avoids the unrealistic assumption of normally distributed continuous indicators and provides accurate standard errors and fit indices (Li, 2016). All factor loadings were statistically significant ( $p < .001$ ), with the majority exceeding 0.60. Composite reliability estimates were above 0.80 across all constructs, and discriminant validity was supported by inter-factor correlations below 0.80 and average variance extracted values above 0.50 for the MOT and MI factors.

### 7.2. Structural model estimation

Following the validation of the measurement model, the structural model was estimated using robust maximum likelihood and full information maximum likelihood to handle missing data. This approach is suitable for non-normal data and incomplete data, and has been shown to yield robust parameter estimates, even in complex models. In cases where sparse response categories in certain binary indicators led to convergence instability, the factor scores from the CFA were used as observed indicators. These adjustments were confirmed through robustness checks using scale composites, which produced comparable parameter estimates.

Two observed covariates, Gender and Classroom Multilingual Context, were included to account for individual and environmental differences. To improve model parsimony and reduce the risk of overfitting, non-significant paths were trimmed from the final specification.

The final SEM demonstrated a very good global fit to the data ( $\chi^2(94) = 172.72$ ,  $p < .001$ ). The Comparative Fit Index (CFI = 0.999), Tucker-Lewis Index (TLI = 0.999), and Root Mean Square Error of Approximation (RMSEA = 0.046, 90% CI [0.035, 0.056]) all exceeded recommended thresholds, indicating strong model-data correspondence. The Standardised Root Mean Square Residual (SRMR = 0.171) exceeded the conventional cut-off of 0.08. However, SRMR is known to be sensitive to models estimated with categorical indicators and robust estimation methods and may be inflated under such conditions (Maydeu-Olivares, 2017). As such, this index is interpreted with caution, and overall model fit is considered acceptable based on the convergence of multiple fit indices.

### 7.3. Path coefficients and explained variance

Motivation emerged as the strongest predictor of MI, with a standardised coefficient ( $\beta$ ) of 0.60 ( $p < .001$ ), explaining 48% of the variance in MI ( $R^2 = 0.48$ ). In turn, Motivation was positively and significantly predicted by:

- Socio-Cognitive Beliefs ( $\beta = 0.21, p < .001$ )
- Second Language Attitudes ( $\beta = 0.18, p = .002$ )
- Instrumental Value Beliefs ( $\beta = 0.28, p < .001$ )
- Frequency of Peer Interaction ( $\beta = 0.13, p = .040$ )

IVBs also demonstrated a direct positive effect on Multilingual Identity ( $\beta = 0.16, p = .003$ ), suggesting that pragmatic orientations contribute to identity formation both independently and via motivational self-guides. Among the observed covariates, both Classroom Multilingual Context ( $\beta = -0.09, p = .020$ ) and gender ( $\beta = -0.08, p = .037$ ) showed small but statistically significant negative associations with Multilingual Identity. Other contextual variables, such as school sector and family language background, were not significant and were therefore excluded from the final model.

The model depicted in Figure 1<sup>1</sup> explained 20% of the variance in Motivation and 48% of the variance in Multilingual Identity. Results were stable across sensitivity analyses using reduced models and alternative indicator formats, confirming the validity of the findings.

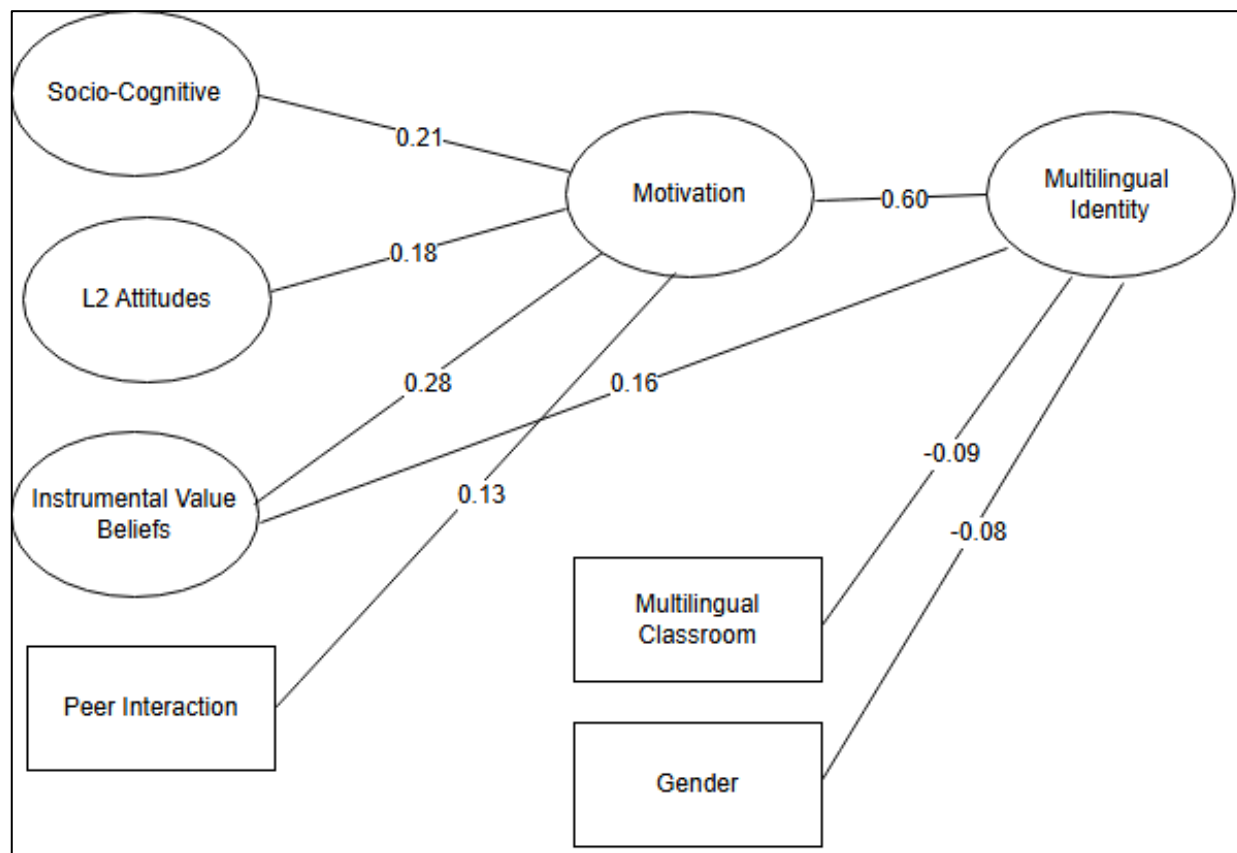


Figure 1. Structural Equation Model for Multilingual Identity

<sup>1</sup> Note: Ellipses represent latent variables estimated through confirmatory factor analysis; rectangles represent observed variables. Lines indicate significant directional paths based on standardised regression coefficients ( $p < .05$ ).  $R^2$  values reflect the proportion of variance explained in the endogenous latent constructs: Motivation and Multilingual Identity. Model fit:  $\chi^2(94) = 172.72, p < .001$ ; CFI = 0.999; TLI = 0.999; RMSEA = 0.046.

## 8. Discussion

This study, situated within Malta's evolving multilingual landscape, aimed to explore how psychological factors and educational context together influence the development of multilingual identity among Maltese adolescents. Malta's bilingual yet increasingly multilingual school environment offered an ideal setting to examine the interaction between motivation and identity in youth. Using a structural equation model, we combined motivation, viewed as a multilingual future self-guide, with socio-cognitive beliefs, language attitudes, and IVBs to develop a cohesive framework to predict students' multilingual identities.

### 8.1. *The Central Role of Motivation*

As hypothesised, motivation emerged as the most significant predictor of multilingual identity, accounting for nearly half of the variance ( $R^2 \approx 0.48$ ). This supports the core principle of the L2 Motivational Self System: having a clear vision of a future multilingual self is crucial in shaping one's current linguistic identity. In a bilingual educational setting, learners who vividly picture themselves as confident multilingual speakers are more likely to incorporate that vision into their present identity (Thompson, 2017; Wang et al., 2021). Our findings endorse the view that identity is not merely a retrospective outcome of language experiences, but a forward-looking project driven by imaginative agency (Norton, 2013; Ushioda, 2011). Motivation, therefore, acts as a "bridge" that transforms beliefs and attitudes into identity commitments (Zareian & Jodaei, 2015). Even in early adolescence, a well-defined multilingual future self is a vital tool in identity development. Classroom practices that foster students' future self-guides (such as having learners envisage their "multilingual me" through writing or discussion) can strengthen both motivation and identity coherence (Gayton, 2025). For language-minoritised youth in particular, the ability to imagine a successful multilingual self may empower them to navigate mainstream school environments.

It is also important to consider that the construction of an "ideal multilingual self" may not be uniform across all learners. For students from Maltese-English bilingual backgrounds, this future self may involve expanding an already established bilingual repertoire. In contrast, for students from migrant or multilingual family backgrounds, the ideal multilingual self may involve negotiating multiple linguistic identities and navigating different expectations across home and school contexts. These variations suggest that motivational self-guides may function differently depending on learners' linguistic trajectories and social positioning.

In the Maltese context, this relationship can be observed in students' engagement with their linguistic repertoires in everyday school life. For example, students who perceive themselves as multilingual are more likely to actively participate in classroom discussions using both Maltese and English, use multiple languages when completing tasks, or engage more confidently with peers from diverse linguistic backgrounds. These behaviours reflect not only language use but also an emerging identity where multilingualism is normalised and valued as part of the self.

### 8.2. *Differentiated predictors of motivation*

All the examined variables of motivation proved to be significant, meaning that socio-cognitive beliefs, second-language attitudes, instrumental values, and peer interaction each had meaningful effects. Among these, IVBs exerted the most significant direct influence on motivation. This suggests that even in a multilingual context, practical orientations, such as perceiving language skills as gateways to educational or career opportunities, remain powerful drivers of student engagement (Ushioda, 2017). Simultaneously, learners' internal assessments of their abilities — in this case, confidence in their multilingual competence and creativity — significantly predicted motivation, indicating that commitment is reinforced not only by external incentives but also by self-efficacy (Zareian & Jodaei, 2015). In situations where students feel uncertain about using multiple languages, strengthening these internal beliefs through positive multilingual experiences could support future identity development.

The influence of language attitudes highlights the importance of cultivating positive dispositions toward all languages in the school setting. Consistent with classical second-language acquisition models (Gardner, 1985; Dewaele, 2013), students with more favourable attitudes toward the L2 showed higher motivation. Notably, our participants incorporated positive attitudes towards both English and other languages into their envisioned futures (Wang et al., 2021). It is important to acknowledge, however, that not all languages in learners' repertoires carry equal social and institutional value. In Malta, English continues to hold significant academic and economic capital, while Maltese remains closely tied to national identity and everyday communication. These dynamics are rooted in Malta's postcolonial linguistic history, in which English has long

functioned as a language of prestige, education, and social mobility, while Maltese has been associated with local identity and cultural belonging (Panzavecchia & Little, 2019). Although these boundaries are increasingly fluid in contemporary multilingual classrooms, such hierarchies continue to shape how learners perceive and value different languages within their repertoires. Other languages, including heritage and migrant languages, may not carry the same level of institutional recognition despite their importance in students' lived experiences. These differences suggest that language attitudes and their contribution to motivation and identity are shaped by underlying power dynamics within the sociolinguistic environment. Even within an increasingly multilingual environment, emotional attachment to the dominant languages continues to guide identity development. This suggests that bilingual education programs should encourage students to value not only high-status languages but also other heritage or foreign languages among their peers. Inclusive language attitudes can feed into stronger motivational visions and, eventually, more robust multilingual identities. Likewise, the significant effect of peer interaction highlights the social dimension of motivation. It supports the view that identity is co-constructed through social engagement and peer affirmation (Fisher et al., 2025). In diverse classrooms, frequent peer communication in multiple languages provides validation and authentic practice, reinforcing students' sense of themselves as multilingual.

These findings can also be interpreted in terms of concrete learning behaviours. For example, students who view multilingualism as beneficial for future academic or career prospects may be more inclined to put effort into language tasks, look for chances to use other languages outside the classroom, or show more persistence when facing linguistic difficulties. Likewise, students with stronger socio-cognitive beliefs might be more willing to experiment with language, including translanguaging practices typical of Maltese classrooms.

### ***8.3. Instrumental value beliefs as a dual pathway to identity***

In this study, "pragmatic reasons" and "instrumental motivations" refer to learners' perceptions of language as a resource for achieving tangible outcomes, such as academic success, future employment, and effective participation in a multilingual society.

A noteworthy finding is that IVBs influenced multilingual identity not only indirectly, through motivation, but also directly. In other words, pragmatic reasons for language learning can become internalised into learners' self-concept as part of being multilingual. Rather than remaining external drivers, these instrumental motivations were woven into how students envision and position themselves as language users. This dual pathway suggests that instrumental and identity-related motives are not mutually exclusive. Our results show that in a context like Malta, pragmatic language goals can be integrated into students' identity narratives (Ceuleers, 2008; Block, 2006).

In the Maltese context, such pragmatic reasons are likely to be closely associated with educational success, future employment opportunities, and the ability to navigate a linguistically diverse society. English, in particular, continues to carry significant academic and economic value, while competence in additional languages may be increasingly perceived as advantageous in a context characterised by growing cultural and linguistic diversity. As such, students' instrumental orientations towards language learning are not abstract, but grounded in their everyday experiences of schooling, assessment, and future aspirations.

For educators and policymakers, this implies that emphasising the future practical benefits of bilingualism is compatible with students' identity development. In practical terms, this may involve explicitly linking language learning to real-life trajectories, such as further education, employment, and participation in a multilingual society, thereby making these benefits visible and meaningful to learners. Bilingual curricula that address both the utilitarian and the personal/cultural value of languages can motivate learners while helping them form a positive multilingual self-image. Evidence for this dual-influence pathway provides empirical support to emerging models of multilingualism that include both individual aspirations and identity outcomes (Henry, 2023).

### ***8.4. Contextual influences: gender and classroom diversity***

Although individual-level factors predominated, two contextual variables, i.e. gender and the classroom's linguistic diversity, showed small but significant associations with multilingual identity. Female students reported slightly lower multilingual identity scores than male students. While this gap was modest, it may reflect broader sociocultural patterns in the shaping of linguistic confidence, participation, or identity expression during early adolescence. For instance, gendered expectations or differences in classroom participation may influence how comfortably students position themselves as multilingual. Educators should

ensure that girls and boys are equally encouraged in multilingual activities.

Similarly, being in a less linguistically diverse class was associated with slightly lower levels of identity. This finding highlights how the school environment can either support or limit the development of multilingual identity. Classrooms with greater linguistic diversity are likely to provide more frequent models and normalise the use of multiple languages, whereas homogeneous settings may restrict such opportunities. In this sense, linguistic diversity may function not only as a demographic feature but as a pedagogical resource that shapes students' identity trajectories. Accordingly, research suggests that institutional environments with strong multilingual norms encourage students' investment in their identities (Fisher et al., 2025; Weidl & Erling, 2025). For bilingual and multilingual education, these results emphasise an equity issue: even in schools with relatively uniform language backgrounds, fostering an inclusive and linguistically responsive classroom climate can make a difference. Although these effects were small, their consistency suggests that contextual factors may shape the conditions under which multilingual identities are more or less readily expressed.

The significance of classroom multilingual context must also be interpreted in relation to the Maltese policy landscape. The *Language Policy for the Junior Years* explicitly recognises that local classrooms are inherently multilingual and emphasises the importance of acknowledging learners' full linguistic repertoires while supporting their development in both Maltese and English (Ministry for Education and Employment, 2022). It further highlights the need for teachers to adopt flexible bilingual strategies and to engage in ongoing professional development in language pedagogy. Similarly, the *Language Policy for the Early Years in Malta and Gozo* promotes positive attitudes towards Maltese, English, and other languages, and frames bilingual development as a shared responsibility across educational contexts (Ministry of Education and Employment, 2016). These priorities are reinforced by the *National Education Strategy 2024–2030*, which emphasises inclusion, diversity, and responsiveness to increasingly heterogeneous student populations. Within this policy framework, a classroom multilingual context is not simply a background variable, but a structurally embedded feature of the Maltese education system that shapes learners' linguistic experiences and identity formation.

The non-significant effect of family language background also warrants consideration. One possible explanation is that, within the Maltese context, widespread exposure to both Maltese and English across educational and social domains may reduce the relative influence of home language practices on identity formation. While previous research has shown that language use within the family can play an important role in shaping language attitudes (Panzavecchia, 2020; Vella, 2019), this influence may be attenuated in contexts where bilingual exposure is pervasive across multiple domains. Additionally, the increasing normalisation of multilingualism in school environments may mean that identity is shaped more strongly by peer interaction and classroom experiences than by family linguistic background alone. This interpretation aligns with research suggesting that family language does not straightforwardly translate into identity but is instead negotiated in relation to wider social and institutional contexts (Little, 2017). Taken together, this finding suggests that, in contexts characterised by strong institutional bilingualism and growing diversity, school-based experiences may play a more central role in shaping multilingual identity.

## 9. Theoretical implications

This study contributes to the current theory by integrating motivational and identity-based frameworks within a multilingual context. The significant role of future self-guides in predicting identity indicates that models of L2 motivation can be expanded to elucidate identity outcomes in bilingual education (Dörnyei, 2009; Henry, 2017). Simultaneously, our findings highlight that such psychological models must be situated within their social environment. Identity is not merely a consequence of motivation, but a dynamic, co-constructed process shaped through interaction and institutional norms (Norton, 2013; Ushioda, 2011). By connecting individual motivation with peer engagement and classroom diversity, we adopt an ecological perspective on multilingual identity development. Notably, the internalisation of pragmatic values as part of identity (the dual pathway) demonstrates that the boundary between “instrumental” and “integrative” factors is more fluid than traditionally assumed and shaped by context (Ceuleers, 2008; Gardner, 1985). Consistent with calls for multi-dimensional approaches to language learner identities, our work highlights the importance of integrating social-cognitive and sociocultural perspectives. While the model demonstrated a good overall fit and yielded theoretically meaningful relationships, some caution is warranted, as the elevated SRMR value suggests that not all residual relationships among variables may be fully captured, indicating the possibility of additional contributing factors. Future research could incorporate additional dimensions, such as translanguaging practices or narrative trajectories, to further explore how motivation and identity mutually influence each other over time.

## 10. Implications for practice and policy

The findings of this study have practical implications for educators and policymakers in bilingual and multilingual settings, particularly in understanding how learners' language use, identity positioning, and participation in classroom discourse are shaped by motivational and socio-cognitive factors. Specifically, supporting adolescents' motivation and identity in tandem calls for initiatives at both the classroom and policy levels. Key strategies include:

- Incorporating identity reflection activities such as self-mapping or multilingual portfolios, to help students envision their multilingual futures and connect language learning to their sense of self.
- Offering scaffolded opportunities for students to use multiple languages in meaningful tasks, thus ensuring successful experiences that build confidence.
- Emphasising both the practical benefits of multilingualism and its personal/cultural value. Validating utilitarian and integrative motivations in tandem encourages students to invest in all their languages.
- Encouraging peer collaboration so that students have social support and authentic contexts to practise their languages, affirming their multilingual identity.
- Training teachers to recognise and address identity dynamics in the classroom. Educators should celebrate students' diverse linguistic backgrounds and help them navigate any identity-related challenges.

At the policy level, schools should cultivate an institutional culture that values all languages as integral to student identity. Language policies must avoid framing multilingualism solely as a utilitarian skill, and instead also celebrate it as a source of pride and belonging. Recent research in Malta has highlighted the need for educational policies to keep pace with shifting linguistic demographics and to validate students' multilingual realities (Panzavecchia, 2024). Fostering such an environment, which includes both top-down policy and everyday practice, can ensure that multilingual identity development is supported at every level of schooling.

These findings further suggest that the implementation of Malta's existing language policy framework requires continued attention, particularly in relation to teacher preparation, multilingual classroom realities, and the consistent pedagogical use of learners' full linguistic repertoires (Camenzuli et al., 2023; Panzavecchia, 2024).

## 11. Limitations and future research

Finally, several limitations should be acknowledged. The cross-sectional design limits causal inference; longitudinal studies are needed to examine how motivation and identity influence each other over time. Our sample from Malta, where two languages are official, may limit generalisability, as results might differ in environments lacking institutional support for home languages. Comparative research elsewhere could clarify context-specific findings.

Additionally, in the present study, the L2 Attitudes construct captures students' evaluative orientations toward second/additional languages as represented in the questionnaire; however, it does not distinguish between English and other heritage or migrant languages, and this should be considered when interpreting the findings.

The SEM model used in this study omitted emotional and regulatory factors, such as language anxiety, enjoyment, and self-regulation, which could affect the motivation–identity relationship. Future research should incorporate these variables to improve explanatory power. We regarded multilingual identity as a single dimension, but identity is complex; using multidimensional measures or person-centred analyses might better capture its intricacies and how motivation relates to different aspects. Additionally, the uneven distribution of participants across school sectors restricted the inclusion of school type as a variable in the structural model and may limit the generalisability of findings related to institutional contexts.

Another limitation is that the absence of Multi-Group Analysis limits the ability to examine potential differences across school sectors or demographic groups, and future research with more balanced samples should investigate model invariance across contexts. Additionally, the elevated SRMR value indicates that some degree of model misfit cannot be entirely dismissed. Although other fit indices suggested a strong model fit, this should be interpreted with caution, especially given the use of categorical indicators.

Lastly, qualitative and mixed-methods research could provide deeper insights into learners' interpretations of motivation and identity, revealing how peer and teacher interactions shape their sense of self, thereby enriching the understanding of motivation and multilingual identity development.

## 12. Conclusion

This study examined the psychological and contextual factors underpinning the development of multilingual identity among Maltese adolescents. The findings indicate that motivation is central, both as a driver and as a consideration of how young people view themselves as multilinguals. Motivation, shaped by IVBs, positive language attitudes, and meaningful peer interaction, is the strongest predictor of multilingual identity. These results emphasise the need for educational practices and policies that simultaneously cultivate both students' motivation and their sense of linguistic self.

Promoting multilingual identity requires classroom environments that value all languages, integrate reflective and collaborative learning experiences, and position language learning as both a real-world skill and a personal journey. At a policy level, multilingualism should be portrayed not only as an economic resource, but also as a cultural and emotional asset.

This research aims to provide empirical evidence to a developing field but future studies should employ longitudinal and mixed-method designs to capture the evolution of motivation and identity over time and across contexts. Refining the model to include affective and self-regulatory factors would further improve understanding. Supporting adolescents' multilingual identity ultimately strengthens their engagement, confidence, and sense of identity within an increasingly diverse linguistic landscape.

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