# Cultivating Autonomous Learning Skills in Socially Diverse Classrooms: Challenges and Solutions

Bunmi Isaiah Omodan <sup>1</sup>,\* <u>{bomodan@wsu.ac.za}</u>

<sup>1</sup>Faculty of Education Walter Sisulu University South Africa

**Abstract.** This article delves into the intricacies of autonomous learning within university classrooms, particularly addressing obstacles associated with cultural and socioeconomic diversity. Through an extensive literature review, the paper identifies key challenges such as varied learning styles, linguistic barriers, and unequal access to resources. Proposed solutions encompass fostering inclusivity, effective technology integration, and targeted support to establish an environment conducive to autonomous learning. Concluding insights emphasize the collaborative efforts needed from educators and policymakers to implement these strategies and cultivate inclusive, technologically enriched, and supportive learning environments in diverse university settings.

**Keywords:** Autonomous learning; socially diverse classrooms; cultural barriers; socioeconomic factors.

# **1** Introduction

In the dynamic landscape of contemporary education, autonomous learning is a pivotal force reshaping the traditional paradigms of teaching and learning. Autonomous learning refers to the ability of individuals to take charge of their learning journey, actively engaging in acquiring knowledge and skills [1]. Unlike conventional models, where the teacher plays a central role, autonomous learning places learners at the forefront, encouraging self-direction, critical thinking, and intrinsic motivation [2]. As we navigate the complexities of 21st-century education, the cultivation of autonomous learning skills emerges as an option and a necessity for students to thrive in a rapidly evolving global society.

A notable and accelerating trend characterises the contemporary educational landscape: the increasing diversity in social and cultural backgrounds within classrooms. Gone are the days when educational environments were homogeneous, reflecting a singular cultural perspective. In today's classrooms, one can find a mosaic of cultural, ethnic, and social identities, enriching the educational experience but also presenting unique challenges. This diversity encompasses not only race and ethnicity variations but also language, socioeconomic status, and familial background differences. Such heterogeneity in student populations necessitates a reevaluation of traditional teaching methods to ensure inclusivity and effectiveness across the spectrum of learners.

Within these diverse educational settings, cultural backgrounds shape the lens through which students perceive and engage with learning [3]. Cultural nuances influence communication styles, learning preferences, and even approaches to problem-solving [4]. Educators are faced with the task of navigating this rich tapestry, acknowledging and leveraging

cultural diversity as an asset rather than a hindrance. Recognising diverse cultural backgrounds in educational settings is not merely an acknowledgment of differences but an essential step toward creating an inclusive learning environment that values and respects each student's unique contributions. As classrooms become microcosms of the global community, educators must proactively address the challenges and opportunities arising from this diversity to foster a truly equitable educational experience.

Moreover, the increasing diversity in social and cultural backgrounds challenges educators to adopt culturally responsive teaching practices [5], [6]. By understanding and integrating students' cultural backgrounds into the curriculum, educators can create a more relatable and engaging learning experience. However, this requires a nuanced approach, as cultural diversity is not a monolithic entity but a dynamic interplay of various factors. Striking the right balance between acknowledging cultural differences and promoting a shared sense of belonging is crucial for cultivating an educational environment where every student feels valued and empowered to embark on their autonomous learning journey.

Against the backdrop of this educational shift, it becomes imperative to acknowledge the increasing diversity in social and cultural backgrounds within educational settings. Classrooms are no longer homogeneous spaces but rather microcosms of a rich tapestry of cultures, languages, and socioeconomic statuses. This diversity brings forth challenges and opportunities, making fostering autonomous learning skills a multifaceted endeavour. In essence, the traditional approaches to education may not suffice to cater to the varied needs and learning styles in socially diverse classrooms. Therefore, understanding and addressing the implications of this diversity on autonomous learning is crucial for the effectiveness of contemporary education systems.

Why is it necessary to delve into autonomous learning in socially diverse classrooms? The rationale lies in its profound impact on educational outcomes and the holistic development of individuals. When embracing autonomous learning, students acquire subject-specific knowledge and cultivate essential life skills such as problem-solving, decision-making, and adaptability. However, the challenges posed by social diversity cannot be ignored. These challenges, ranging from cultural differences to socioeconomic disparities, necessitate a comprehensive exploration of strategies to make autonomous learning accessible and effective for all students. Thus, the paper seeks to dissect these challenges, propose solutions, and offer practical strategies to empower educators in fostering autonomous learning in diverse educational settings.

As I embark on this argumentative exploration, the objectives of this paper are twofold. Firstly, it aims to provide a nuanced understanding of the challenges posed by social diversity in cultivating autonomous learning skills. Secondly, it offers actionable solutions and practical strategies that educators can implement to create an inclusive and effective autonomous learning environment. Through this endeavour, readers can expect to gain insights into the complexities of autonomous learning in socially diverse classrooms and, more importantly, discover tools to surmount these complexities for the benefit of learners worldwide.

# 2 Method

An extensive literature review was undertaken to address the outlined objectives, encompassing pertinent works on Autonomous Learning in Education and the multifaceted landscape of Social Diversity in Educational Settings. This exploration delved into the challenges intrinsic to cultivating Autonomous Learning, specifically examining obstacles stemming from cultural barriers and socioeconomic factors. The discourse extended to articulate viable solutions and practical strategies for effectively mitigating these challenges. Additionally, a noteworthy component of the analysis involved presenting a case study exemplifying the successful implementation of autonomous learning principles. The comprehensive conclusion encapsulated findings, leading to the formulation of implications and recommendations that serve to guide future endeavours in this critical domain.

## **3** Results and Discussion

Based on content analysis, the results of this systematic literature review present namely: Autonomous Learning in Education, Challenges in Cultivating Autonomous Learning, and Solutions and Practical Strategies for Effective Autonomous learning in Classrooms.

#### 3.1 Autonomous Learning in Education

The existing body of literature on autonomous learning within educational settings underscores the pivotal role of fostering learner autonomy through a spectrum of strategic interventions. A seminal contribution by [7] emphasises the significance of educators in cultivating a supportive environment that propels independent learning. Technology has a role in enhancing autonomous learning offers an interesting perspective, proposing a comprehensive framework aimed at honing critical thinking skills among learners [8]. Innovative models have been presented in classroom English teaching that are explicitly designed to increase learner autonomy, demonstrating the transformative impact of digital technology in this educational context [9]. Conversely, [10] shed light on a notable discrepancy, revealing that conventional classroom textbooks often fall short in their capacity to foster learner autonomy. In a nuanced examination, [11] challenge prevailing notions by accentuating the indispensable role of teachers in guiding students toward independence, thus challenging the oversimplified concept of autonomous learning as entirely teacher-less. These diverse perspectives collectively underscore the intricate interplay of pedagogical strategies, technological integration, and educator influence in the pursuit of nurturing autonomous learners.

Social diversity, particularly within the unique context of Vietnamese students, profoundly impacts autonomous learning dynamics, as elucidated by [12]. This impact extends beyond conventional educational paradigms, influencing the very fabric of information dissemination and acquisition. In line with Nguyen's argument, the potential of social diversity to mitigate the adverse effects of information cascades in social learning, offering a nuanced perspective on how diverse social backgrounds can foster a more discerning and independent approach to knowledge acquisition [13]. Additionally, the research by [14] delves into the realm of complex artefact learning, revealing that social diversity can catalyse automated learning processes, particularly when confronted with intricate subject matter.

In the realm of academic risk-taking behaviours, a pertinent correlation emerges between social studies-oriented academic risk-taking behaviours and autonomous learning skills, as expounded by [15]. This connection suggests that the social dimensions of learning extend beyond mere knowledge acquisition to encompass a willingness to engage in academic risks, thereby shaping the development of autonomous learning capabilities. Exploration of the social dimensions of autonomy in language learning has been carried out by [16] to explore the complex role of the social environment. The findings underscore how social diversity influences the construction of autonomy in language learning, shedding light on the interplay between individual agency and the surrounding social milieu.

#### 3.2 Challenges in Cultivating Autonomous Learning

This section discusses challenges associated with the cultivation of autonomous learning in classrooms. This was divided into two major challenges: cultural barriers and socioeconomic factors, with aech having sub-challenges.

# **3.2.1 Cultural Barriers**

Cultural barriers present intricate challenges in cultivating autonomous learning within educational settings [17]. The varying learning styles and preferences rooted in diverse cultural backgrounds [18] can lead to disparities in the effectiveness of autonomous learning strategies, as different cultures prioritise collaborative or individualised approaches to education. Additionally, linguistic diversity poses a significant hurdle, with language differences influencing comprehension and engagement with autonomous learning materials [19]. The impact of cultural nuances extends to communication styles and decision-making processes, affecting collaborative efforts in autonomous learning environments [20]. As we delve into these challenges one by one, it becomes apparent that understanding and addressing cultural barriers is pivotal for creating an inclusive and effective autonomous learning environment that caters to the diverse needs of students from various cultural backgrounds.

Some challenges relate to cultural barriers in fostering independent learning. First, Diverse Learning Styles and Preferences: Cultural diversity often translates into a myriad of student learning styles and preferences [18]. Some cultures may prioritise collaborative and grouporiented learning, while others may value individualised approaches. Navigating these variations becomes a challenge for educators aiming to implement autonomous learning strategies that cater to students' diverse needs and expectations. For example, a culture that traditionally emphasises rote memorisation might find it challenging to adapt to the critical thinking and self-directed nature of autonomous learning. Second, Linguistic Challenges: Language reflects culture and is a crucial tool for learning. Cultural diversity within classrooms often brings linguistic variations that can impede the effectiveness of autonomous learning initiatives [19]. Students who are not proficient in the language of instruction may struggle to engage with autonomous learning materials, hindering their ability to grasp concepts independently. This challenge is particularly pronounced in multicultural environments where students speak different native languages, requiring educators to address language-related barriers to ensure equitable access to autonomous learning resources. Third, Communication Styles and Decision-Making Processes: Cultural differences extend to communication styles and decision-making processes, posing challenges in collaborative autonomous learning environments [20]. For instance, cultures that emphasise hierarchical decision-making may struggle with autonomous learning projects' more egalitarian and participatory nature.

#### 3.2.2 Socioeconomic Factors

Socioeconomic factors introduce formidable challenges to cultivating autonomous learning within educational settings [21]. Unequal access to resources [22], financial constraints [23], and the psychological impact on students collectively contribute to a complex landscape that can impede the development of autonomous learning skills. The digital divide exacerbates disparities in resource access, hindering students with limited technological resources from fully engaging in online autonomous learning platforms. Financial limitations constrain opportunities for enrichment activities and supplementary resources, affecting the acquisition of critical thinking skills essential for autonomous learning. Additionally, the psychological barrier of imposter syndrome or a perceived exclusivity of autonomous learning among those with greater financial means can erode students' confidence and motivation to navigate their learning paths independently. In examining these challenges individually, a nuanced understanding emerges

of how socioeconomic factors intersect with and shape the landscape of autonomous learning in education.

First, Unequal Access to Resources: Socioeconomic disparities manifest prominently in the uneven access to resources crucial for autonomous learning. Students from lower-income backgrounds often face limitations in acquiring necessary tools such as computers, internet access, and educational software. This digital divide compounds the challenges as online learning platforms become essential for autonomous learning initiatives. The lack of access to these resources can create a significant barrier for students to engage effectively in self-directed learning activities, hindering their autonomy in the learning process. Second, Financial Constraints and Limited Educational Opportunities: Financial constraints constitute another formidable challenge, impacting students' access to educational opportunities that foster autonomous learning. Enrichment activities, educational experiences beyond the classroom, and supplementary learning resources often require financial investment. Students from lower socioeconomic backgrounds may find themselves limited in participating in these activities, diminishing their exposure to diverse learning experiences. This limitation, in turn, hinders the development of critical thinking and problem-solving skills, crucial components of autonomous learning. Third, Psychological Impact and Imposter Syndrome: The psychological impact of socioeconomic factors, particularly imposter syndrome, can profoundly affect students' engagement with autonomous learning. When students perceive autonomous learning as a domain reserved for those with greater financial means, they may experience feelings of inadequacy and self-doubt. This psychological barrier becomes a significant impediment, influencing students' confidence and motivation to navigate their learning paths independently. Addressing imposter syndrome requires equal access to resources and fostering an inclusive learning environment that encourages all students, regardless of socioeconomic background, to actively participate in autonomous learning endeavours.

Students from lower socioeconomic backgrounds may face various challenges with implications for their autonomous learning experiences. Unequal access to resources disadvantages them, hindering their ability to fully engage with online platforms and educational tools crucial for autonomous learning initiatives. Financial constraints limit their exposure to enriching educational experiences and supplementary resources, potentially impacting the development of critical thinking skills. Moreover, the psychological barrier of imposter syndrome can disproportionately affect students from lower-income families, fostering feelings of inadequacy and inhibiting their confidence to navigate their learning paths independently. These challenges may contribute to a cycle of educational inequity, where students from economically disadvantaged backgrounds encounter hurdles that hinder their ability to develop the autonomous learning skills necessary for success in a rapidly evolving educational landscape.

First, Implications of Unequal Access to Resources: The uneven access to resources has direct implications for students from lower socioeconomic backgrounds. Limited access to computers, internet connectivity, and educational software may hinder their ability to participate in autonomous learning initiatives fully. The digital divide exacerbates existing disparities, potentially leaving these students with fewer opportunities to engage in self-directed learning activities, hindering the development of crucial skills necessary for navigating the modern educational landscape. Second, Implications of Financial Constraints and Limited Educational Opportunities: Financial constraints contribute to disparities in educational opportunities, affecting students from lower socioeconomic backgrounds. Limited access to enrichment activities, educational experiences beyond the classroom, and supplementary learning resources may impede the development of critical thinking and problem-solving skills. The implications

extend beyond the immediate challenges of accessing resources, influencing students' ability to explore diverse learning experiences integral to fostering autonomy in their educational journeys. Third, Implications of Psychological Impact and Imposter Syndrome: The psychological impact of socioeconomic factors, particularly in the form of imposter syndrome, has significant implications for students from lower-income families. Feeling like an outsider or doubting their ability to succeed in autonomous learning environments can erode their confidence and motivation. Addressing this psychological barrier is essential to ensure that students from different socioeconomic backgrounds feel empowered to engage actively in autonomous learning. Creating an inclusive learning environment that fosters a sense of belonging is crucial for mitigating the implications of imposter syndrome and promoting equitable opportunities for all students.

#### 3.3 Solutions and Practical Strategies for Effective Autonomous learning in Classrooms

Addressing the challenges of cultivating autonomous learning in socially diverse classrooms requires a multifaceted approach encompassing solutions and practical strategies. Solutions involve systemic changes that can create an inclusive environment, while practical strategies offer actionable steps for educators to implement. By fostering a culture of inclusivity, leveraging technology effectively, and providing targeted support, educators can bridge the gaps posed by cultural and socioeconomic challenges. Implementing learner-centred approaches, offering differentiated instruction, and emphasising the importance of intrinsic motivation form practical strategies that empower students to take ownership of their learning. Together, these solutions and strategies aim to create a dynamic and supportive educational landscape where all students, regardless of cultural or socioeconomic background, can thrive in their autonomous learning journeys. In doing this, the role of teachers is very significant.

## 3.3.1 Solutions to the Challenges of Autonomous Learning: The Roles of Educators

Below are the solutions that could enhance effective autonomous learning in classrooms. These include cultivating a culture of inclusivity, effectively leveraging technology, and advocating for targeted support. As discussed below, educators become essential architects of inclusive, technologically enriched, and supportive learning environments in these multifaceted roles. First, Cultivating a Culture of Inclusivity: Fostering a culture of inclusivity is a foundational solution to address challenges associated with cultural and socioeconomic diversity [24]. This involves creating an environment where diverse perspectives are valued and students feel a sense of belonging. Educators can facilitate open discussions about cultural differences, encouraging students to share their unique experiences. Promoting a sense of community within the classroom also helps break down cultural and socioeconomic barriers, creating an atmosphere conducive to autonomous learning. However, cultivating a culture of inclusivity requires educators to actively foster an atmosphere where diverse perspectives are acknowledged and valued, fostering a sense of belonging among students from varied cultural and socioeconomic backgrounds. This role involves initiating open discussions about cultural differences and encouraging students to share their unique experiences, creating a classroom community that dismantles cultural and socioeconomic barriers and facilitates an environment conducive to autonomous learning.

Second, Leveraging Technology Effectively: Effective use of technology is a crucial solution to bridge the digital divide and enhance autonomous learning opportunities [25]. Providing access to digital resources and platforms, especially for students with limited technological resources, ensures equitable participation. Moreover, incorporating interactive and adaptive technologies can cater to diverse learning styles, offering personalised learning

experiences that empower students to engage autonomously with educational content. In leveraging technology effectively, educators serve as architects of equitable learning opportunities. They play a crucial role in providing access to digital resources and platforms, especially for students with limited technological resources, ensuring that the digital divide does not impede their engagement with autonomous learning initiatives. Additionally, educators become adept users of interactive and adaptive technologies, tailoring their integration to cater to diverse learning styles. This approach empowers students with personalised learning experiences, fostering autonomy in their engagement with educational content.

Third, Providing Targeted Support: Targeted support mechanisms are essential to address the specific needs of students facing cultural and socioeconomic challenges [26]. This involves identifying students who may require additional assistance and providing tailored resources, mentorship programs, or counselling services. Offering targeted support acknowledges the individualised nature of challenges and works towards creating an environment where all students can actively participate in autonomous learning initiatives. Moreover, educators function as advocates for targeted support, recognising and addressing the specific needs of students facing cultural and socioeconomic challenges. This involves the identification of students who may require additional assistance and the implementation of tailored resources, mentorship programs, or counseling services. By providing targeted support, educators acknowledge the individualised nature of challenges and contribute to creating an environment where all students, irrespective of their backgrounds, can actively participate in and benefit from autonomous learning initiatives. In these roles, educators become instrumental in building inclusive, technologically enriched, and supportive learning environments that facilitate the success of autonomous learning for students with diverse needs and experiences.

## 3.3.2 Practical Strategies for effective autonomous learning in classrooms

Below are the practical strategies that could enhance the effective implementation of autonomous learning in classrooms. These include implementing learner-centred approaches, offering differentiated instruction and emphasising the importance of intrinsic motivation. First, Implementing Learner-Centered Approaches: Learner-centered approaches stand as a pedagogical cornerstone, prioritising students' unique needs and varied learning styles [27]. By incorporating dynamic strategies such as project-based learning, collaborative activities, and personalised projects, educators empower students to delve into subjects of personal interest, fostering a sense of autonomy in their educational journeys. This multifaceted strategy accommodates the diverse cultural backgrounds present in classrooms and actively encourages self-directed learning. Through project-based initiatives, students can choose topics aligned with their interests, engage in collaborative endeavours that reflect a range of perspectives, and undertake personalised projects that cater to their individual learning preferences. As students navigate these self-selected educational experiences, they not only deepen their understanding of the subject matter but also cultivate essential skills such as critical thinking, problem-solving, and a proactive approach to learning [28], establishing a foundation for lifelong learning and success.

Second, Offering Differentiated Instruction: Differentiated instruction, a cornerstone of effective teaching, intricately tailors pedagogical methods to meet the diverse learning needs of students [29]. Educators employing this strategy adeptly vary the content, instructional processes, and end products to address individual students at their distinct learning levels. This approach explicitly recognises and accommodates students' diverse cultural and socioeconomic backgrounds, ensuring that each learner receives instruction and support aligned with their specific learning preferences and abilities. By personalising the educational experience,

differentiated instruction facilitates a more inclusive and equitable classroom environment and maximises the potential for student engagement, understanding, and overall academic success.

Third, Emphasising the Importance of Intrinsic Motivation: Encouraging intrinsic motivation emerges as a potent strategy in the cultivation of autonomous learning [30]. Educators wield the ability to shape learning experiences that resonate with students' interests and passions, instilling a profound sense of curiosity and self-motivation. Educators create an environment where learning becomes a self-driven pursuit by meticulously designing curricula and activities that align with students' personal inclinations. Emphasising the relevance of educational content to students' lives and future aspirations further amplifies this strategy. When students perceive the direct applicability of what they are learning to their own experiences and aspirations, it ignites a genuine desire for knowledge acquisition. This intentional approach transcends potential cultural and socioeconomic barriers to engagement and establishes a foundation for sustained and autonomous learning journeys, where students are intrinsically motivated to explore, understand, and excel.

# 4 Conclusion

In conclusion, this paper has delved into the intricate landscape of autonomous learning in university classrooms, particularly in the face of cultural and socioeconomic diversity. Key challenges identified include the varied learning styles and preferences rooted in different cultural backgrounds, linguistic barriers, and unequal access to resources perpetuated by socioeconomic disparities. These challenges hinder the effectiveness of autonomous learning and underscore the need for targeted strategies to ensure inclusivity and equitable opportunities for all students. The exploration of cultural barriers has emphasised the importance of understanding and addressing diverse learning styles, linguistic challenges, and the sociocultural nuances that impact students' engagement with autonomous learning.

Key solutions and practical strategies have been presented, highlighting the transformative potential of autonomous learning in university classrooms. Cultivating a culture of inclusivity, where diverse perspectives are valued, and a sense of belonging is fostered, stands out as a foundational solution. Leveraging technology effectively through the provision of digital resources and platforms ensures equitable participation, bridging the digital divide. Additionally, providing targeted support, including tailored resources and mentorship programs, addresses the specific needs of students facing cultural and socioeconomic challenges. Implementing learner-centred approaches, offering differentiated instruction, and emphasising intrinsic motivation through personalised and relevant learning experiences represent practical strategies that empower students to take ownership of their educational journeys. By adopting these transformative approaches, university classrooms can evolve into inclusive and dynamic spaces where autonomous learning becomes a powerful tool for academic success and lifelong learning

## References

- D. Asadinik and S. M. Suzani, "A critical review of autonomous learning in l2 research: From theory to practice," *J. Appl. Linguist. Lang. Res.*, vol. 2, no. 8, pp. 41–56, 2015, [Online]. Available: http://www.jallr.com
- [2] I. Horváth, "Autonomous learning: What makes it work in postgraduate interpreter training?," Across Lang. Cult., vol. 8, no. 1, pp. 103–122, 2007, doi: 10.1556/Acr.8.2007.1.6.

- [3] S. Joy and D. A. Kolb, "Are there cultural differences in learning style?," *Int. J. Intercult. Relations*, vol. 33, no. 1, pp. 69–85, 2009, doi: 10.1016/j.ijintrel.2008.11.002.
- [4] K. Cagiltay and B. Bichelmeyer, "Differences in Learning Styles in Different Cultures: A Qualitative Study.," in Annual Meeting of the American Educational Research Association, 2000, p. 12. [Online]. Available: https://eric.ed.gov/?id=ED417056
- [5] C. R. Ellerbrock, B. C. Cruz, A. Vásquez, and E. V. Howes, "Preparing Culturally Responsive Teachers: Effective Practices in Teacher Education," *Action Teach. Educ.*, vol. 38, no. 3, pp. 226–239, 2016, doi: 10.1080/01626620.2016.1194780.
- [6] T. Jarosinski, Culturally Responsive Teaching Practices for Educators of Culturally and Linguistically Diverse Students. LAP LAMBERT Academic Publishing., 2020. [Online]. Available: https://digitalcommons.brockport.edu/ehd\_theses
- [7] H. Reinders, "Towards a Classroom Pedagogy for Learner Autonomy," Aust. J. Teach. Educ., vol. 35, no. 5, pp. 40–55, 2010.
- [8] A. Dinçer, "Autonomous Language Learning with Technology: Beyond the Classroom," J. Lang. Teach. Learn., vol. 8, no. 2, pp. 123–126, 2018.
- [9] D. I. Pratiwi and B. Waluyo, "Autonomous learning and the use of digital technologies in online English classrooms in higher education," *Contemp. Educ. Technol.*, vol. 15, no. 2, 2023, doi: 10.30935/cedtech/13094.
- [10] H. Reinders, "Do Classroom Textbooks Encourage Learner Autonomy?," Novitas-Royal, vol. 5, no. 2, pp. 265–272, 2011.
- [11] N. S. Masouleh and R. B. Jooneghani, "Autonomous learning: A teacher-less learning!," *Procedia - Soc. Behav. Sci.*, vol. 55, pp. 835–842, 2012, doi: 10.1016/j.sbspro.2012.09.570.
- [12] T. Nguyen, "Impacts of Socio-culture on the development of autonomous learning: A lens of Vietnamese context," J. Stud. Educ., vol. 1, no. 1, pp. 1–10, 2011, doi: 10.5296/jse.v1i1.866.
- [13] F. Rosas, K.-C. Chen, and D. Gunduz, "Social diversity for reducing the impact of information cascades on social learning," *Electr. Eng. Syst. Sci.*, vol. 1, no. 5, pp. 1–10, 2018, [Online]. Available: http://arxiv.org/abs/1805.05500
- [14] E. R. Batot and H. Sahraoui, "Promoting social diversity for the automated learning of complex MDE artifacts," *Softw Syst Model*, vol. 21, no. 2, pp. 1159–1178, 2022, doi: 10.1007/s10270-021-00969-9.
- [15] C. A. Karademir and A. Akgul, "Students' social studies-oriented academic risk-taking behaviours and autonomous learning skills," *Cypriot J. Educ. Sci.*, vol. 14, no. 1, pp. 56–68, 2019, doi: 10.18844/cjes.v14i1.4038.
- [16] G. Murray, "Social dimensions of autonomy in language learning," in Social Dimensions of Autonomy in Language Learning, Palgrave Macmillan UK, 2014, pp. 1– 277. doi: 10.1057/9781137290243.
- [17] R. S. Caffarella, "Viewing Cultural Barriers as Opportunities to Enhance Learning: An International Perspectiv," in *Adult Education Research Conference*, 2010, pp. 1–10. [Online]. Available: https://newprairiepress.org/aerc/2010/papers/10
- [18] N. R. Ngatirin and Z. Zainol, "Automatic Detection of Learning Styles: A Decade Review on Data-driven Approaches," J. Phys. Conf. Ser., vol. 1997, no. 1, 2021, doi: 10.1088/1742-6596/1997/1/012001.
- [19] L. Sercu, "Autonomous learning and the acquisition of intercultural communicative competence: Some implications for course development," *Lang. Cult. Curric.*, vol. 15, no. 1, pp. 61–74, 2002, doi: 10.1080/07908310208666633.
- [20] A. M. Coroiu, A. D. Călin, and M. Nuțu, "Communication Style An Analysis from the

Perspective of Automated Learning," in *Artificial Neural Networks and Machine Learning*, V. Kůrková, Y. Manolopoulos, B. Hammer, L. Iliadis, and I. Maglogiannis, Eds., I.Springer International Publishing., 2018, pp. 1–14. doi: 10.1007/978-3-030-01418-6\_58.

- [21] R. P. Lopes, C. Mesquita, L. A. de Góis, and G. dos Santos Júnior, "Students' Learning Autonomy: a Systematic Literature Review," *EDULEARN19 Proc.*, vol. 1, no. July, pp. 5958–5964, 2019, doi: 10.21125/edulearn.2019.1435.
- [22] J. Kormos and K. Csizér, "The Interaction of Motivation, Self-Regulatory Strategies, and Autonomous Learning Behavior in Different Learner Groups," *TESOL Q.*, vol. 48, no. 2, pp. 275–299, 2014, doi: 10.1002/tesq.129.
- [23] B. Castleman and K. Meyer, "Financial constraints & collegiate student learning: A behavioral economics perspective," *Daedalus J. Am. Acad. Arts Sci.*, vol. 148, no. 4, pp. 195–216, 2019, doi: 10.1162/DAED\_a\_01767.
- [24] A. Thebyane, "Create and champion an inclusive culture," *HR Futur.*, vol. 5, no. 1, pp. 28–39, 2013, [Online]. Available: http://dx.doi.org/10.1016/j.jsames.2011.03.003%0Ahttps://doi.org/10.1016/j.gr.2017.0 8.001%0Ahttp://dx.doi.org/10.1016/j.precamres.2014.12.018%0Ahttp://dx.doi.org/10. 1016/j.precamres.2011.08.005%0Ahttp://dx.doi.org/10.1080/00206814.2014.902757 %0Ahttp://dx.
- [25] D. Wiwin, U. W. Utami, and T. Taris, "Digital Media and Its Implication in Promoting Students' Autonomous Learning," *JET (Journal English Teaching)*, vol. 8, no. 1, pp. 97–106, 2022, doi: 10.33541/jet.v8i1.3284.
- [26] R. Grant, G. Olivier, C. Rawlings, and C. Ross, *Enhancing the engagement and success of distance students through targeted support programmes*, no. January 2011. New Zealand.: The Open Polytechnic of New Zealand, 2011.
- [27] M. Cleveland-Innes and C. Emes, "Principles of Learner-centered Curriculum: Responding to the Call for Change in Higher Education," *Can. J. High. Educ.*, vol. 35, no. 4, pp. 85–110, 2005, doi: 10.47678/cjhe.v35i4.183522.
- [28] D. Wohlfarth, D. Sheras, J. Bennett, B. Simon, J. Pimentel, and L. Gabel, "Student Perceptions of Learner-Centered Teaching," *InSight A J. Sch. Teach.*, vol. 3, pp. 67–74, 2008, doi: 10.46504/03200808wo.
- [29] A. E. Smale-Jacobse, A. Meijer, M. Helms-Lorenz, and R. Maulana, "Differentiated Instruction in Secondary Education: A Systematic Review of Research Evidence," *Front. Psychol.*, vol. 10, no. November, 2019, doi: 10.3389/fpsyg.2019.02366.
- [30] J. Kormos and K. Csizer, "The interaction of motivation, self-regulation, and autonomous learner behavior in different learner groups," *TESOL Q.*, vol. 48, no. 2, pp. 275–299, 2014, doi: 10.1002/tesq.129.