

Wiring for wisdom: CBD metrics for balanced aesthetic education

Educare alla saggezza: metriche del Culture Based Development per un'educazione estetica equilibrata

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Abstract

This paper presents a quantitative evaluation method, grounded in the Culture Based Development (CBD) paradigm, for measuring the degree to which the Swansea and Brecon Diocesan Curriculum Direction achieves successful “wiring for wisdom” through aesthetic education. CBD conceptualizes such wiring as a balanced cultivation of pride, through exposure to Cultural-Heritage-related aesthetic education (CH), and cultivation of curiosity, through Living-Culture-related aesthetic education (LC). When subject to balanced wiring through CH and LC, the individual is able to support reflective, emotionally grounded, and bias-resistant learning. The study showcases the CBD-based metric Cultural Entropy that quantifies the balance between CH and LC and enables systematic assessment of aesthetic educational design. Using the Swansea and Brecon Diocesan Curriculum Direction as a case study, the paper demonstrates how Cultural Entropy can serve as a robust quantitative tool for diagnosing and successfully finetuning the aesthetic education policies.

Keywords: Culture Based Development; aesthetic education; wiring for wisdom; pride-curiosity balance; cultural entropy metrics.

Sintesi

Questo articolo presenta un metodo di valutazione quantitativa, basato sul Paradigma del Culture Based Development (CBD), volto a misurare il grado in cui il “Swansea and Brecon Diocesan Curriculum Direction” realizza efficacemente il processo di “wiring for wisdom” attraverso l’educazione estetica. Nel Quadro teorico del CBD, tale processo è inteso come una coltivazione equilibrata dell’orgoglio identitario, promossa mediante forme di educazione estetica connesse al patrimonio culturale (Culturale Heritage, CH), e della curiosità sviluppata attraverso esperienze educative legate alla cultura vivente (Living Culture, LC). Quando l’individuo è esposto ad un equilibrio tra CH e LC, diventa maggiormente capace di sostenere processi di apprendimento riflessivi, emotivamente fondati e resistenti ai bias cognitivi. Lo studio presenta e applica l’indicatore Cultural Entropy, una metrica sviluppata nell’ambito del CBD che consente di quantificare il livello di equilibrio tra CH e LC e di valutare in modo sistematico la progettazione dell’educazione estetica. Assumendo il “Swansea and Brecon Diocesan Curriculum Direction” come caso di studio, il contributo dimostra come Cultural Entropy possa costituire uno strumento quantitativo robusto per diagnosticare e ottimizzare le politiche educative orientate alla dimensione estetica.

Parole chiave: Culture Based Development; educazione estetica; predisposizione alla saggezza; equilibrio tra orgoglio e curiosità; metriche di entropia culturale.

1. Introduction

Aesthetic education is the type of education engages through engagement in active or passive participation in aesthetic experiences and activities such as art, culture, environment and spiritual practices. Aesthetic education plays a foundational role in shaping how people perceive, interpret, and emotionally navigate the world, because it is neatly related to the formation of the moral and value system of the individuals. While traditional curricula often focus on content delivery aimed at developing cognition, the Culture Based Development (CBD) paradigm (Tubadji, 2025a) argues that learning outcomes depend fundamentally on the cultural-emotional “wiring” of the mind, achieved through aesthetic education (Tubadji, 2026; Tubadji et al. 2026a, 2026b, 2026c, 2026d). This wiring is expressed through the balance between: (i) pride-rooting the learner in their inherited identity, meaning, and emotional safety, and (ii) curiosity – opening the learner to exploration, creativity, and new knowledge. Pride is therefore related to art and culture participation associated with Cultural Heritage (CH), while curiosity is stimulated through engagement with modern and contemporary forms of art and culture, termed by CBD Living Culture (LC). When the pride and curiosity forces are harmonised, learners develop what the CBD paradigm terms “wiring for wisdom”: a cognitive-emotional configuration that supports reflective thinking, wellbeing, and resistance to cultural bias over rational cognition and decision making.

The Swansea and Brecon Diocesan Curriculum Direction offers a compelling case for examining how educational design can cultivate such balanced aesthetic development. The curriculum places emphasis on values, cultural spiritual literacy, and meaningful encounters with the arts, making it an ideal setting in which to test whether aesthetic intentions translate into a healthy balance between identity-affirming and curiosity-promoting experiences. Yet despite its conceptual strengths, no quantitative tool currently exists in policy making toolkit to measure the success of this balance or its implications for learners’ cognitive-emotional flourishing.

This paper introduces a CBD-based quantitative metric designed to fill this gap. By operationalising the pride-curiosity equilibrium as measurable indicators of Cultural Entropy i.e. balance of the aesthetic wiring of the mind, the study provides a systematic method for evaluating the extent to which the Diocesan Curriculum Direction succeeds in wiring students for wisdom (Tubadji, 2025b). The method not only enables a rigorous assessment of aesthetic education but also offers a replicable tool for policy designers seeking to foster unbiased, emotionally grounded, and intellectually open learning environments

2. Literature overview on measurement of aesthetic education

Internationally, comparable measures for aesthetic education are scarce, uneven, and conceptually underdeveloped. While aesthetic education is widely and growingly recognised as contributing to cognitive, cultural, and socio emotional development (Huggins, 2026; Sacco et al., 2026), most countries lack standardised frameworks that define aesthetic competencies in a way that could easily support cross national comparison. Large scale international assessments – such as PISA or TIMSS – focus primarily on literacy, numeracy, and scientific reasoning, leaving aesthetic and arts based competencies largely unmeasured (Bamford, 2006; Winner et al., 2013). Research in comparative arts education further highlights that aesthetic learning outcomes are culturally locally specific

and therefore difficult to operationalise in universally directly comparable measurement (Eisner, 2003; Savage & Fautley, 2011). Therefore, despite the growing scholarly consensus on the importance of aesthetic learning, the absence of shared definitions and measurement tools hinders systematic and comparable evaluation of aesthetic education across national systems (Schindler et al., 2017).

Meanwhile, general education has made substantial progress in developing internationally comparable measures, most notably through the Bologna Process, which has harmonised higher education structures across 49 participating systems. The Bologna Process established the European Higher Education Area (EHEA) and introduced a three cycle degree structure, mutual recognition of qualifications, and a shared system of quality assurance (European Commission/Eacea/Eurydice, 2024). These reforms produced comparable frameworks – such as the Qualifications Framework for the European Higher Education Area (QF EHEA) and the general European Qualifications Framework (EQF), that systematized learning outcomes and competencies in a standardised manner, enabling comparability across national systems (i.e. Council of the European Union, 2017). Scholars note that Bologna's success demonstrates that large scale internationally comparable quantification of educational processes and achievement is possible when political will and institutional cooperation align to create, introduce and coordinate the adoption of a standardized measurement methodology (Witte et al., 2009; Zgaga, 2019).

However, Bologna style mechanisms have not been extended to aesthetic education. Although some countries have developed national arts or aesthetic education standards, these remain heterogeneous and lack a unifying international framework. Even within the EHEA, recent implementation reports highlight persistent variation in how countries interpret and operationalise learning outcomes, suggesting that extending comparability to aesthetic domains would require significant conceptual groundwork (European Commission/Eacea/Eurydice, 2024). Moreover, the Bologna Process itself does not specify aesthetic competencies, focusing instead on academic and professional skills. Scholars in arts education argue that the field's epistemic diversity – ranging from embodied learning to cultural identity formation – makes standardisation particularly challenging (Savage & Fautley, 2011; Siahaan et al., 2014). The Bologna Process related gathering of data started 2005. Meanwhile, even the more general statistical gathering for the production in the arts and creative industries sector has been a challenge that Eurostat has managed to start resolving only since 2007 and is still way behind the depth that other aspects of socio-economic activity enjoy as quantitative representation and therefore evidence-based policy making practice. Consequently, the aesthetic education field lacks shared metrics that would allow researchers and policymakers to compare aesthetic education across borders or integrate it into broader educational quality assurance systems.

Two recent academic sources highlight the tension between developing locally specific educational measures and ensuring international comparability, a challenge central to Unesco's global education agenda. Guadalupe (2025) argues that international assessment systems risk imposing homogenised standards that overlook cultural and contextual diversity, urging a shift toward measurement frameworks that reflect what societies value in education rather than merely what can be quantified. Similarly, Braun and Singer (2019) emphasise that while international large-scale assessments (ILSAs) such as PISA and TIMSS enable cross country benchmarking, they often struggle to balance validity across diverse linguistic, cultural, and institutional contexts. From a UN perspective, this tension underscores the need for context responsive yet globally coherent metrics, tools that respect local educational realities while contributing to shared global monitoring under SDG 4. The

challenge lies in designing instruments that are both culturally adaptive and methodologically standardised, ensuring that global comparisons inform equitable policy without erasing local meaning.

3. Cultural Entropy as a measure for aesthetic education

Culture Based Development (CBD) argues that the exposure to aesthetic experiences creates the emotional wiring of the people shaping the local cultural milieu - defined as the shared moral codes, values, and the derived from them code of preferences typically followed in a locality. CBD argues that this cultural milieu is a major but often under-quantified factor shaping how people learn, think, and make decisions. Modern econometrics shows that failing to measure an important variable leads to biased and inaccurate models (Desmet et al., 2017; Wooldridge, 2016), and CBD identifies this under-specification problem as widespread in current socio-economic research on culture and cultural policy making evaluation (Tubadji, 2014; 2025a). To address this gap, CBD distinguishes between two core components of a cultural aesthetics that generate two very distinct parts of the cultural milieu: Cultural Heritage (CH), the exogenous source of moral heuristics, identity, and emotional reassurance; and Living Culture (LC), the endogenous source of curiosity, openness, and continuous learning that depends heavily on contemporaneous investment in order to emerge into existence. A balanced interplay between CH and LC supports rational, unbiased thinking and fosters innovative, cohesive, and sustainable societies (Tubadji, 2025a; 2025b).

To quantify this balance, CBD introduces Cultural Entropy (CE), derived from Shannon's entropy formula (Shannon, 1948), which measures the relative proportions of CH and LC. Namely, using complexity theory to reduce this complexity and in specific tapping on the mathematics of the Shannon entropy index, the CBD paradigm formulates the Cultural Entropy measure, considering CH and LC as the two classes that the cultural milieu's complexity decomposes into. Thus, the CBD Cultural Entropy can be estimated using the following formula:

$$CULTURAL\ ENTROPY\ (CE) = -(p_1 \log_2 p_1 + p_2 \log_2 p_2)$$

where:

p_1 = number of CH experiences / (number of CH experiences + number of LC experiences)

p_2 = number of LC experiences / (number of CH experiences + number of LC experiences)

In other words, the Cultural Entropy measure expresses how evenly the CH and LC categories are represented within the total set of aesthetic experiences to which a person is exposed-experiences that, over time, shape that person's emotional-value biases. Since we reduce the cultural milieu to only two classes when applying the Shannon entropy formula, the resulting CE score can, by mathematical necessity, take values only between 0 and 1.

A value close to 1 indicates that CH and LC experiences appear in almost equal proportions (a highly balanced aesthetic environment), while a value close to 0 indicates that one category dominates almost entirely (a highly unbalanced aesthetic environment). CBD suggests that when CE approaches 1, the individual is taking a rational choice, free from cultural bias. In any $0 < CE < 1$, the rational choice of the individual becomes bounded by a cultural permissible set and a deviation from the rational choice proportional to a cultural

difference with some component of the choice that gives rise to this bias, challenging the sense of familiarity and fear of uncertainty in the individual. When CE approaches 0 the cultural bias towards one class is intolerable to this culturally discriminated class and leads to destructive outcomes for social cohesion and socio-economic cooperation among the agents exposed to such aesthetic wiring of the brain (Tubadji, 2025a; 2025b).

In other words, a perfect balance between CH and LC (50:50) yields $CE = 1$, representing optimal conditions for learning, cooperation, emotional stability, and sustainable development. As CE declines, learning efficiency and social cohesion deteriorate, and near-zero CE reflects extreme imbalance, marginalization, and systemic instability – what CBD frames as a Polanyian “great transformation.” Because CH and LC are transmitted through aesthetic education – via heritage engagement, exposure to diverse cultural events, and even tourism – CE provides a powerful and concise metric for both reducing empirically while capturing quantitatively comprehensively the complexity of the cultural influences on human behaviour and local development.

4. CBD quantitative analysis of the aesthetic balance in the Swansea Diocese Curriculum

We will focus here on applying the above Cultural Entropy measure for evaluating the degree of healthy balance, i.e. healthy cultural emotional brain wiring achieved through the aesthetic education planned to be provided by the Swansea and Brecon Diocese Curriculum for Schools.

In Swansea and Brecon areas, diocesan curriculum guidance is provided primarily through a combination of diocesan-led resources, co-construction with schools, and alignment with national Curriculum for Wales frameworks. The Diocese of Swansea and Brecon supports its Church in Wales schools by offering spiritual, ethical, and values-based educational guidance, along with resources and initiatives that shape holistic curriculum design rooted in Christian principles. For Catholic schools, additional non-statutory diocesan guidance is issued to help them design curricula that reflect Catholic faith and values; this guidance is produced collaboratively by diocesan officers, school practitioners, and the Catholic Education Service to ensure consistency with the national Curriculum for Wales and its Religion, Values and Ethics (RVE) requirements.

Namely, the Diocesan Director of Education (DDE) for Swansea and Brecon developed comprehensive guidance in academic year 2024/25 to support diocesan schools in their strategic planning and implementing the Curriculum for Wales. This guidance incorporated the Welsh concept of *Cynefin* – emphasizing learners’ sense of place and belonging – and provided a framework for developing a pluralistic Religion, Values and Ethics (RVE) curriculum and Christian Distinctiveness and Ethos across the school. Before writing the initial guidance document, the DDE visited all diocesan schools to evaluate their current provision and identify the next steps in their Curriculum for Wales journey and how this related to the theological underpinning of what it means to be a Church in Wales school. This needs-based approach, was based upon extensive research into the education system and landscape, ensured the guidance was grounded in the real challenges and contexts schools. The guidance is meant to be regularly reviewed and refined, ensuring it remains responsive to schools’ evolving needs and reflects best practice in curriculum development as well as remaining grounded in the Welsh curriculum and what makes a Church in Wales distinctive and promotes spiritual and moral development of all.

Thus, the 2024/25 diocesan guidance sets a clear framework for Church in Wales schools to strengthen their Christian ethos through three themes: Welcome, Creativity, and Landscapes of Faith. Across the year, schools are asked to deepen Christian distinctiveness, develop pupil spirituality, and ensure high-quality, inclusive RVE and collective worship. The guidance emphasises compassion (Schools of Sanctuary), creative exploration of faith, environmental stewardship (Climate School 180), and strong partnerships with churches and the diocese. Professional learning - especially The Bible Course – underpins staff development, while Section 50 expectations shape ongoing evaluation and improvement.

These aims of the diocesan guidance are clearly aligned with the balanced cultural emotional wiring that the CBD Cultural Entropy measure can quantify. When CE is close to 1 the most favorable wiring for inclusive RVE can be expected to be ensured through the aesthetic education along this diocesan curriculum.

Specifically, Section 50 refers to the Church in Wales' inspection focus on how effectively a school's distinctive Christian character shapes its life, learning, relationships, wellbeing, and leadership. It examines how well the school's Christian vision supports all learners – academically, spiritually, morally, socially, and culturally – regardless of background; how inclusive and meaningful its collective worship is; how well Religion, Values and Ethics (RVE) is taught; and how leaders ensure that Christian ethos is embedded, evaluated, and strengthened through partnerships with the church, diocese, and community.

Thus, the CBD CE measure is an ideal quantitative indicator that can facilitate the monitoring and degree of successful implementation of the requirements of Section 50. We have demonstrated below how this can be done first technically (in terms of calculating the Cultural Entropy) for the case of the Swanses and Brecon curriculum direction; then we give the analytical interpretation of this CE measure; and finally discussing the policy implications that can be derived from it.

4.1. Classifying Culture to Calculate Cultural Entropy

The Diocesan Curriculum Direction covers three periods – Autumn – dedicated to the topic of Welcome, Spring dedicated to the topic of Creativity and Summer, dedicated to the topic of Landscapes of Faith. Within each topic a range of activities with aesthetic education nature are recommended.

The CBD methodology requires that first the bulk of aesthetic experiences under evaluation has to be classified into two groups: (i) aesthetic experiences related to CH and building the pride and familiarity relying on problem solving through heuristics stored in the collective memory and shared with the individual by his/her surrounding context (the cultural milieu); and (ii) aesthetic experiences related to check Living Culture (LC) – building the curiosity that expands the knowledge of the individual acquired as own experiences by the individual¹.

¹ Clearly, any classification of elements into categories may be sensitive to the interpretation of the classifying researcher(s). However, within the limits of reasonability, this is an element of researcher bias that exists in virtually any quantification where counting in terms of categories is involved. Meanwhile, this aspect of the method is also representing its flexibility and ability to be adaptive and be respectful to any particular case study. It is clear that the elements of cultural heritage are different across space, and the elements of living culture across space could be different. But in the

We will proceed below by listing the set of recommended aesthetic activities for each term and classifying them in these two types of aesthetic experience – CH engagement and LC engagement. We will then calculate the total number of CH-related experiences and the total number of LC-related experiences, we will sum these together and find what is the proportion that the CH-related experiences represent in the overall sum of aesthetic experiences recommended to be included in the term and what was the percentage of LC-related ones. Then we will substitute in the CE formula to calculate the overall balance of the aesthetic education provided in the semester. These calculations are provided in the Figures 1, 2, 3.

Term	Recommendation	CH engagement	LC engagement
AUTUMN	Reflecting on meaning of welcome in a Church school	✓	✓
AUTUMN	Exploring faith, hope, love & value of education	✓	
AUTUMN	Reviewing school's Christian foundations/distinctiveness	✓	
AUTUMN	Developing every learner through Christian ethos	✓	✓
AUTUMN	Impact of Prayer Clubs / Project Touchline	✓	✓
AUTUMN	Section 50: Christian character & SMSC development	✓	
AUTUMN	Christian character shaping relationships	✓	
AUTUMN	Promoting understanding of Wales & diverse communities		✓
AUTUMN	Contribution of RVE to Christian character	✓	
AUTUMN	Leadership articulating Christian vision	✓	
AUTUMN	Statutory RVE & collective worship compliance	✓	
AUTUMN	Partnerships with church/diocese/community	✓	
AUTUMN	Reviewing Distinctiveness & Dignity Charter	✓	
AUTUMN	Becoming a School of Sanctuary		✓
AUTUMN	Teaching Jesus as refugee (Taith Adfent)	✓	
AUTUMN	Identity & Belonging resources		✓
AUTUMN	Journey of Life resources		✓
AUTUMN	Superpower of Looking (art analysis)		✓

same time, every place can surely identify for itself what it has inherited culturally locally from the past and what locally is creative innovation contemporaneously created in the local context. Inviting the categorisation of the particular into two standardised aggregate categories of CH and LC helps to bridge the particular and translate it into the internationally comparable logic that it naturally possesses, by inviting local practitioners to apply their knowledge of the particular cases and link this knowledge to the same categories in classifying their specific realities vis a vis a harmonised and simple enough to be valid internationally categorisation (because every place has some heritage and some innovation, whatever its particular expressions may be). Thus, the CBD approach helps achieve the translation of locally specific qualitative knowledge into a quantitatively generalisable and comparable across space analysis.

AUTUMN	Kindertransport (Holocaust education)		✓
AUTUMN	Refugee literature & extended writing		✓
AUTUMN	Spirituality: Self		✓
AUTUMN	Spirituality: Others		✓
AUTUMN	Peace Education & Peace Mala		✓
AUTUMN	Understanding Christianity units: God, People of God, Incarnation	✓	
AUTUMN	Developing Worship Councils	✓	✓
AUTUMN	Child-Led Collective Worship	✓	✓
AUTUMN	Festivals: Harvest, Remembrance, Advent, Christmas	✓	
AUTUMN	Values for Lifesavers	✓	✓
AUTUMN	Gospels in Schools	✓	
AUTUMN	Section 50: Impact of Collective Worship	✓	
AUTUMN	RVE Coordinators Meeting: recording RVE		✓
AUTUMN	Developing diocesan curriculum	✓	✓
AUTUMN	Professional Learning: The Bible Course	✓	
PERCENTAGES		0.55	0.45
CULTURAL ENTROPY		0.993	

Figure 1. Aesthetic Education – Term 1 – Welcome.

Term	Recommendation	CH engagement	LC engagement
SPRING	Understanding creativity		✓
SPRING	Developing creativity in learning		✓
SPRING	How different faiths use creativity & festivals	✓	✓
SPRING	Spoken Word in RVE		✓
SPRING	Digital apps, DCF, Minecraft in RVE		✓
SPRING	Human One Creative Arts Project	✓	✓
SPRING	Using Jeremy Thomas paintings	✓	✓
SPRING	Visits to places of worship	✓	
SPRING	Spoken Word artists (e.g., Dai Woolridge)		✓
SPRING	Go & See arts funding		✓
SPRING	Search for Meaning & Purpose		✓
SPRING	Authority and Influence	✓	
SPRING	Spirituality: Self		✓
SPRING	Spirituality: Others		✓
SPRING	Spirituality: Beyond	✓	✓
SPRING	Section 50: Quality/objectivity/diversity of RVE	✓	
SPRING	Festivals (Easter, Holocaust Memorial Day)	✓	
SPRING	Child-Led Collective Worship	✓	✓

SPRING	Values for Lifesavers	✓	✓
SPRING	RVE Coordinators Meeting: creativity focus		✓
SPRING	Human One Project sharing		✓
SPRING	Professional Learning: Bible Course	✓	
SPRING	Farmington Scholarship		✓
PERCENTAGES		0.38	0.62
CULTURAL ENTROPY		0.958	

Figure 2. Aesthetic Education – Term 2 – Creativity.

Term	Recommendation	CH engagement	LC engagement
SUMMER	Teaching about climate		✓
SUMMER	Prophetic voice & activism	✓	✓
SUMMER	Nature as subject (not object)		✓
SUMMER	Spirituality: Beauty		✓
SUMMER	Climate emergency responses of world religions	✓	
SUMMER	Natural World & Living Things		✓
SUMMER	Relationship & Responsibility	✓	✓
SUMMER	Values & Ethics	✓	✓
SUMMER	Climate School 180 programme		✓
SUMMER	Christian Aid Week & Letters for Creation	✓	✓
SUMMER	Refugee Week		✓
SUMMER	Pilgrimage to local church	✓	
SUMMER	Creating films & digital guidebooks		✓
SUMMER	Churches Count on Nature		✓
SUMMER	Year 6 Leavers Service (Trees theme)	✓	✓
SUMMER	Collective Worship: festivals, Christian Aid, leavers service	✓	
SUMMER	Values for Lifesavers	✓	✓
SUMMER	Professional Learning: Prophetic Voice & Activism	✓	✓
SUMMER	Bible Course	✓	
PERCENTAGES		0.42	0.58
CULTURAL ENTROPY		0.981	

Figure 3. Aesthetic Education – Landscapes of Faith.

Based on the above classification of the activities into CH and LC, we were able to estimate that the CE in Term 1 was 0.993, in Term 2 CE was 0.958 and in Term 3 0.981. The same estimation can be calculated if one considers all the three semesters together and then the overall CE for the Swansea and Brecon Diocesan Curriculum recommendations would amount to 0.995. How can now this quantification of the balance between CH and LC in the recommended aesthetic education by the Diocese be interpreted?

4.2. Cultural Entropy in the Swansea Diocese Curriculum

To facilitate our analysis, we can visually represent the calculations about the CE in Terms 1, 2, 3 and the full academic year 2024/25 in one comparative table. This is Figure 4 below.

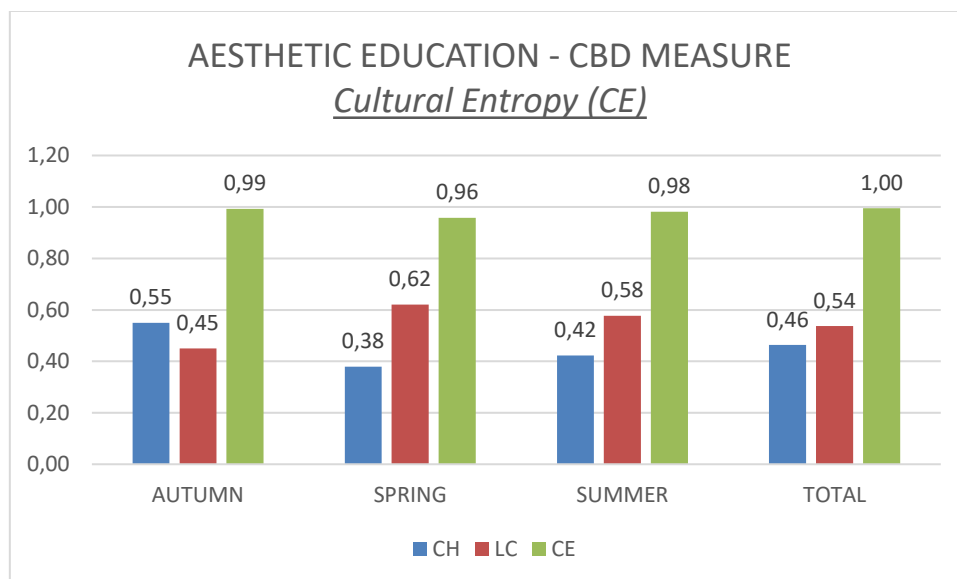


Figure 4. Cultural Entropy across terms and total in academic year 2024/25.

Term 1 has been most balanced between CH and LC, Term 2 the most disbalanced due to more attention to LC aesthetic experiences and Term 3 again so, although slightly more aesthetically in balance than Term 2. It is also noteworthy that Term 1 is more out-weighted by the CH experiences, while Term 2 and 3 are out-weighted by the LC experiences. What is the intuition behind this direct reading of the numbers?

By maintaining an almost perfectly even balance of aesthetic engagement across the 2024/25 academic year (46 (CH):54 (LC)), the Curriculum achieves a Cultural Entropy (CE) value of 0.995 – the highest value observed, and very close to the theoretical maximum of 1. This high CE score indicates that the Curriculum Direction is designed with exceptional balance, providing students with nearly equal exposure to CH and LC aesthetic experiences throughout the year.

Such balance is crucial. When CH and LC appear in almost equal proportions, students develop an emotionally healthy and culturally unbiased mindset – one that combines a stable sense of pride in their own identity with an equally strong curiosity and openness toward others. A CE value close to 1 therefore quantifies that the Curriculum, if implemented as recommended, fully supports its stated aims and creates optimal conditions for inclusive, open, and culturally balanced learning. This makes CE a highly appropriate and effective measurement tool for the purposes of Section 50.

5. Discussion of the CE measurement from policy making perspective

If a school implements the recommendations with a true 50:50 balance between CH and LC, it will achieve the ideal $CE = 1$. Schools are not required to implement every individual recommendation; however, it is essential that they maintain the balanced 50:50 aesthetic

ratio that the Curriculum Direction makes possible.

The outweighing of CH and LC in the overall aesthetic exposure of an individual in itself is a shortcoming driving people away from the ideal $CE=1$ best for their emotional mental health. While in human behaviour $CH=1$ is the best condition, cultural policy and aesthetic education are alternative compatible tools to intervene the wiring of the brain. Thus, if the CE for the cultural participation in the locality outside of school indicates with secondary statistics to policy makers that people locally tend to engage more in CH, then the aesthetic education curriculum is justified to be implemented with $CE < 1$, with less CH and out-weighted LC component in order to enhance the building of curiosity in the students. Alternatively, if low engagement with one's heritage is acknowledged by the cultural institutions and businesses locally, the aesthetic education curriculum will be most helpful to people by out-weighting its CE towards CH by emphasizing on activities that engage the students with aesthetic experiences of CH nature to facilitates the building of sufficient degree of pride in their emotional education that in combination with the local cultural art scene and market will guarantee an overall CE exposure to the students equal to 1.

This means that using the CE measure to evaluate schools performance can be relevant not only to show how much the implemented school curriculum matches the recommendation of the Diocese, but CE can also be used in order to determine what is locally best and most relevant to be done as adaptation of the recommendations for best school curriculum addressing the specific needs of the local community.

Namely, the weighting of CH and LC in the curriculum for aesthetic education in a particular school is not a self-purpose. The CE for the curriculum has to be calculated parallel to the CE evaluation of the cultural and arts participation in place of living of the student, in order to estimate what is the need for support of the wiring of the brain towards a healthy aesthetic level through the educational channel.

This discussion of how CH and LC are weighted within the CE index extends beyond the requirements of Section 50. It shows that the CE measure is not only suitable for evaluating curriculum balance but can also serve as a powerful tool for broader, place-based policymaking. By capturing how an aesthetic curriculum influences the cultural-emotional balance of learners, the CE index helps anticipate the curriculum's wider effects on the socio-economic development and flourishing of people and places.

Moreover, the Cultural Entropy framework can be applied by policymakers across sectors beyond basic education to evaluate the balance of their own cultural provision and its resulting CE score. This allows different sectors – such as arts, heritage, tourism, and spirituality – to collaborate with the education system in designing coordinated strategies that ensure learners experience a healthy and balanced overall CE profile within their local environment. The International Pascal Observatory has developed dedicated policy briefs addressing CE balance specifically within these sectors, published as Briefings 33 to 36 (Tubadji et al., 2026a; 2026b; 2026c; 2026d), providing practical guidance for sector-wide implementation. Specifically, in practice, the regular DDE visits around schools can be utilized by schools to receive help from the DDE to adjust their required CE needs and to synchronize this across schools through the DDE mediating role.

6. Conclusions

This contribution showcased the quantitative measure Cultural Entropy, based on the

Culture Based Development paradigm, and illustrated its use for evaluating the quality of aesthetic education provided by an educational curriculum. To implement this illustration, the study used the case of the Diocesan Recommendations to School in Swansea and Brecon, Wales.

In particular, the methodology showcased through our case study demonstrates that the CE measure offers a powerful and flexible tool for evaluating aesthetic education within the Diocese Curriculum Direction and beyond. While an ideal balance of CH and LC ($CE = 1$) represents the healthiest cognitive–emotional environment for students, achieving this balance in practice requires thoughtful adjustment to local cultural conditions. Schools need not implement every recommendation mechanically; rather, they should calibrate their CH–LC ratio in relation to the wider cultural participation patterns of their community, strengthening curiosity where heritage engagement dominates, or reinforcing pride where heritage involvement is weak. By aligning curricular balance with local cultural ecosystems, CE enables educators and policymakers to support students’ emotional development in the most context-sensitive way. In this sense, CE functions not only as a measure of curriculum alignment with Section 50, but also as a strategic indicator for place-based policy design aimed at fostering human flourishing.

Further to this, the quantitative results presented here have internal validity because they use all case specific curriculum information for the case study and apply the methodology precisely. Namely, the generalizability of these results is due to the fact that CE is a method of standardization of the specific to a general measure that is comparable across case studies. Thus, once mapped to the CE measure, the specific details of any case study can serve for a consistent and clear comparison with other case studies that apply the same CBD methodology, without compromise of case-specific precision, because the aggregation of the individual particularities of the case is inbuilt into the standardization process used by CBD for categorizing any particular details into CH and LC categories. This CBD approach of aggregation creates an effective bridge between the particular and the generalizable that facilitates comparability across different case studies by allowing each case study to adapt its specific context and meaning to the CH and LC categories without loss of specificity and with gain of generalizability. This is a particular advantage of the CE measure – that it simultaneously allows both: (i) flexibility and full respect to local particular context and (ii) helps the translation of this locally specific context into a standardized internationally comparable measurement that satisfies all statistical standards for such a comparison.

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