

# Influence of independent learning curriculum, local culture, social attitudes, and motivation on student creativity: A structural equation modeling approach



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**Abstract** This study examines the influence of the independent learning curriculum, local culture, social attitudes, and motivation on students' creativity in learning at public senior high schools in Bima Regency. The research employed a quantitative, ex post facto design involving 258 senior high school students. Using the Krejcie and Morgan formula, the minimum sample size was 181 respondents. Data were collected through questionnaires distributed to the participants, and descriptive and inferential statistical analyses were conducted using structural equation modeling (SEM) based on variance with Smart Partial Least Squares (SmartPLS) software. The results indicate that: (1) Descriptively, all variables are categorized as relatively excellent or high. (2) The theoretical model of the relationships between the variables influencing creativity in learning was empirically validated, with exogenous variables demonstrating high predictive relevance toward creativity (Q-square value = 0.918,  $p < 0.00$ ). This suggests that the structural model has a very high predictive accuracy. Consequently, fostering creativity through improvements in the implementation of the Independent Learning Curriculum, local culture, social attitudes, and motivation is recommended. (3) Implementing the Independent Learning Curriculum, local culture, social attitudes, and motivation has a significant positive effect on creativity, with the Independent Learning Curriculum and local culture contributing the most to this impact. (4) Motivation acts as a mediator, further enhancing the effects of the Independent Learning Curriculum, local culture, and social attitudes on creativity. The findings underscore the importance of tailored educational strategies that align with cultural and social contexts to inspire creativity in students. Additionally, integrating motivational approaches into curriculum design ensures long-term engagement and sustained creative growth among learners.

**Keywords:** independent learning, local culture, social attitudes, motivation, SDG

## 1. Introduction

Education is expected to evolve alongside changing times and advancements in information technology. In response to these demands, Indonesia's Minister of Education initiated significant reform by developing independent learning curriculum (Indonesian: Kurikulum Merdeka Belajar). The key characteristics of this curriculum include (a) a transition from thematic learning to core subjects, (b) the establishment of core subjects, and (c) a strong emphasis on digitalization and fostering students' independent attitudes to reflect a commitment to modernizing education in Indonesia and aligning it with global standards (Zhan & Niu, 2023). The curriculum aims to provide students with a more cohesive, structured educational experience that focuses on core subjects and enhances their critical thinking and problem-solving skills. Furthermore, the emphasis on digitalization prepares students for a technology-driven world, equipping them with the essential skills needed to face the challenges of sustainable development (SDG) in the present and the future.

As previously mentioned, under the auspices of the minister of education, the Indonesian government has introduced a new educational framework known as the learning curriculum. This curriculum is characterized by its flexibility and emphasis on essential content (Munawwarah & Munira, 2023). Moreover, educational institutions have the autonomy to tailor learning experiences to the needs and characteristics of their students (Nurisman et al., 2023). This customization addresses Indonesian classrooms' diverse backgrounds and learning styles. The independent learning curriculum represents a strategic effort by the Indonesian government to increase the country's education quality. It responds to the educational challenges posed by the COVID-19 pandemic, which highlights new adaptive learning methods and resilient educational structures (Mulyono et al., 2023). Designed to be implemented as an additional measure in schools, this curriculum aims to mitigate the learning crisis



(Chatzipanagiotou & Katsarou, 2023). Central to this initiative is technology, which fosters learning communities that facilitate the exchange of best practices among educators, students, and scholars. The curriculum enhances individual learning experiences and builds a collaborative educational environment that supports the promotion of sustainable development (SDG).

The implementation of the independent learning curriculum (Indonesian: Kurikulum Merdeka Belajar) marked a transformative phase in Indonesia's educational landscape. By prioritizing core competencies, this curriculum aims to equip graduates with the essential skills to navigate and address local and global challenges. Millennials, often regarded as the most technologically adequate generation of the 21st century, have significantly influenced pedagogical strategies in contemporary education (Sam et al., 2019). Integrating digital tools enriches the educational experience and cultivates critical thinking and creativity among students, which are vital for success in the 21st century. Additionally, the emphasis on independent learning empowers students to take ownership of their educational journeys, thereby fostering habits conducive to lifelong learning. As academic institutions and educators have embraced this reform, it is imperative to assess its impact on student outcomes continuously and refine pedagogical strategies accordingly. Through ongoing professional development and comprehensive support for teachers, the independent learning curriculum has the potential to significantly enhance the quality of education in Indonesia, ultimately contributing to the creation of a knowledgeable and capable workforce poised to thrive in a rapidly evolving global landscape.

The rollout of the independent learning curriculum commenced in Indonesia in 2022, beginning with a pilot phase in select schools (Al Fajri & Andarwulan, 2023). However, by 2023, the curriculum had been fully adopted nationwide to prepare graduates with the competencies required to meet imminent challenges (Intiana et al., 2023). This curriculum is strategically designed to increase educational standards and reinforce the foundational pillars of education, thereby instilling profound respect for local culture. It aims to nurture a future generation that embodies the nation's cherished values throughout its educational experiences. The curriculum encompasses a range of attitudinal competencies, including environmental stewardship, social responsibility, and cultural awareness (Mathew & Parameswari 2023; Maknun et al., 2024).

Moreover, local culture can be contextualized within national and international frameworks, integrating noble values into the educational experience and guiding students toward positive behavioral outcomes (Putri et al., 2022; Zummi et al., 2020). By embedding local cultural values into the curriculum, there is a significant opportunity to cultivate a globally aware society, often called global citizenship (Massaro, 2022; Karatsiori, 2023). For example, the province of West Sumatra has implemented the Minangkabau Natural Culture and Local Content Curriculum, which encompasses local cultural education, traditions, and the sustainable use of natural resources. Local culture serves as an identity marker and a repository of ancestral heritage, shaping the nation's collective identity while reflecting its perceptions, beliefs, and customs (Jones & Leech, 2015). These cultural elements influence human behavior within ecological and systemic contexts, suggesting that behavior is shaped by cognitive, affective, and conative components that interact in understanding, feeling, and responding to the surrounding environment.

Social attitudes, defined as individuals' awareness in guiding their actions and behaviors toward others, are pivotal in prioritizing collective social goals over personal interests within societal frameworks (Constantino, et al., 2022). According to Indonesia's Minister of Education and Culture Regulation No. 21/2016 regarding content standards, social attitudes encompass honesty, discipline, courtesy, confidence, empathy, and responsibility in interactions with family, peers, educators, and the broader community. By fostering these social attitudes through the independent learning curriculum, the initiative aims to develop individuals who are not only academically proficient but also socially responsible. This focus on cultivating positive social attitudes can contribute to addressing pressing social issues, thereby promoting a cohesive, inclusive society that values collaboration and mutual respect (Rivalina, 2020).

Social attitudes pertain to the behaviors that individuals or groups exhibit in their interactions with social entities (Varas et al., 2018). This includes the predispositions, attitudes, and ideological values that individuals or groups embrace within a shared context. Social attitudes are manifested through repeated and consistent activities toward a social object, as observed by an individual and their peers (Burkitt et al., 2021). Positive attitudes are crucial in social interaction and community engagement; thus, children should develop an affinity for people and social activities. Social development is a learning process aimed at adapting to group norms, morals, and traditions, which also significantly influence the formation of social attitudes in an individual. This plays a significant role in self-motivation and sharing benefits with others, elucidating the desired aspects of an individual's creative personality (McDonald & Crandall, 2015).

Creativity is paramount, as it epitomizes a pivotal capability in the human experience. Creativity is deemed indispensable in the contemporary landscape and is characterized by an increasingly competitive job market. Fostering creativity within individuals substantially enriches their lives and facilitates success in pursuing competitive achievements and, upon integration into the professional realm (Luna Scott, 2015).

Individuals' creativity differs in terms of physical, attitudinal, and environmental attributes (Ansary, 2023). Accompanied by a learning motivation, students can nurture their respective creative capacities. Student creativity, both collectively and individually, is fostered by a supportive and stimulating learning environment and by the guidance of educators who facilitate the students' creative processes.

These objectives align with the principles of sustainable education and cultural enrichment, demonstrating a commitment to fostering innovative educational reforms. Designed to develop well-rounded, socially responsible, and globally competent individuals, they emphasize evidence-based approaches to addressing educational challenges, enhancing creativity, and integrating cultural values. Such initiatives contribute significantly to advancing an inclusive and forward-thinking educational framework, aligning with global standards and addressing the evolving demands of contemporary education.

## 2. Methods

### 2.1. Research Design

This research provides a better understanding of trilogy leadership and digital skills. It contributes concrete solutions to improve the quality of education and teacher competency in facing the challenges of an ever-evolving era. The research path model shown in Figure 1 below. Curriculum (X1), local culture (X2), social attitudes (X3), motivation (Y1), and creativity (Y2). The research was designed as an ex post facto study. Ex facto research examines a past event and retrospectively observes the factors contributing to its occurrence (Kinyua, 2023). Termed ex post facto (causal), this study explores the causal relationship between exogenous variables (X) and endogenous variables (Y).

The research design model positioned the independent learning curriculum (X1), local culture (X2), social attitudes (X3), motivation (Y1), and creativity (Y2) as endogenous variables. The interrelationships among these variables are illustrated in Figure 1 below.

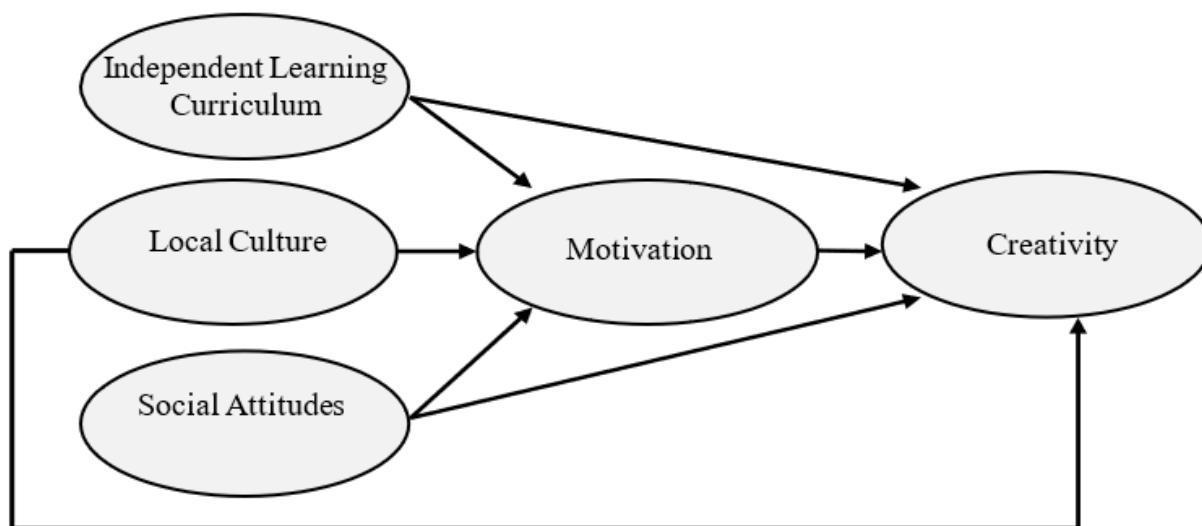


Figure 1 Interrelationships between Variables.

The term population refers to the entire set of objects or subjects with specific characteristics delineated by the researcher for examination and subsequent inference (Sujarweni, 2014). This study population included 258 individuals who were enrolled in public senior high schools in Bima Regency.

In addition, samples constitute a subset of the population, which is selected to be representative and capable of reflecting the population. The employed sampling technique was proportional random sampling (Berndt, 2020). The minimum sample size for a population of 258 is 181 (derived from N = 260) as the table 1 below.

Table 1 Distribution of study sample members.

No	Schools	Population	Samples
1	State High School 1 Soromandi	91	64
2	State High School 1 Donggo	36	25
3	State High School 1 Bolo	36	25
4	State High School 1 Belo	39	27
5	State High School 2 Donggo	56	39
	Total	258	181

The sampling of individuals from each population was conducted randomly, ensuring that every member had an equal opportunity to be selected. This study employed a lottery technique to ensure equal representation of all students enrolled in senior high schools in the Bima Regency.

### 2.2. Data analysis



In this study, the primary data collection method involved the distribution of structured questionnaires. The questionnaire was meticulously designed to encompass five sections, each corresponding to specific variables of interest: independent learning curriculum (X1), local culture (X2), social attitudes (X3), motivation (Y1), and creativity (Y2). This structured approach aimed to assess these interconnected variables comprehensively and their influence on students' educational experiences. To maximize the reliability of the data collected, the questionnaire sections were crafted to elicit clear and relevant responses.

Each section focused on a specific variable, with questions designed to probe various dimensions of the respective constructs. For example, the section on the independent learning curriculum (X1) explored how students perceive their learning environment and the resources available to them. Similarly, the sections on local culture (X2) and social attitudes (X3) aimed to understand the cultural context and social dynamics influencing students' educational experiences. Furthermore, the motivation (Y1) section investigated the factors that drive students to engage with their learning. In contrast, the creativity (Y2) section assessed students' perceptions of their creative capacities and opportunities within the curriculum. This multifaceted approach allowed for a nuanced understanding of how these variables interact and contribute to student outcomes.

Pilot testing was conducted to ascertain the validity and reliability of the research instruments. Validity was assessed via Pearson's product-moment correlation, whereas reliability was evaluated via Cronbach's alpha coefficient. Furthermore, content validity was determined through expert judgment. These assessments by experts were considered sufficiently representative to affirm that the developed questionnaires and observation formats met the criteria for content validity (Almohanna et al., 2022). The employed questionnaire followed a Likert scale model, with each score attributed accordingly. The questionnaire comprised positive (favorable) and adverse (unfavorable) statements. Positive statements signified support for the indicators of the variables under examination, whereas negative statements indicated the opposite.

### 3. Results

#### 3.1. Respondent characteristics

This study sampled 181 students from all the senior high schools in Bima Regency as respondents. Among the 258 distributed questionnaires, only 181 were returned and deemed analyzable. The initial step before data analysis involved describing the data, including the characteristics of the respondents, such as their school of origin and gender. The following section presents the characteristics of the respondents who participated in this study. A description of the respondents' characteristics is provided in Table 2 below.

**Table 2** Respondent characteristics.

Criteria		Count	(%)
School of origin	State High School 1 Soromandi	64	35.4
	State High School 1 Donggo	25	13.8
	State High School 1 Bolo	25	13.8
	State High School 1 Belo	27	14.9
	State High School 2 Donggo	40	22.1
Gender	Male	62	34.3
	Female	119	65.7

#### 3.2. Outer Model Evaluation

The reliability level within the PLS model was assessed via Cronbach's alpha and composite reliability, as proposed by Ghazali (2011). The analysis indicates that both the Cronbach's alpha and the composite reliability values exceeded 0.70, suggesting reliability. Overall, the research variables exhibited high internal consistency, indicating reliability. Furthermore, convergent validity was determined by the average variance extracted (AVE), with a minimum expected value of 0.50. The estimation results revealed AVE values above 0.50 for the variables, indicating that more than 50% of the measurement indicators are captured within each variable, thus confirming convergent validity.

Upon meeting the criteria for validity, reliability, and convergent validity in the measurement model evaluation, the next step was to examine discriminant validity. Discriminant validity ensures the distinctiveness of the research variables from each other, theoretically and empirically, through statistical testing.

Statistical measures for discriminant validity included cross-loadings and the Fornell and Lacker criteria. The cross-loading criteria elucidate discriminant validity at the indicator level, whereas the Fornell and Lacker criteria provide insight into evaluating discriminant validity at the variable level.

Discriminant validity is deemed satisfactory according to the Fornell and Lacker criteria when the square root of the average variance extracted (AVE) of a variable surpasses its correlation with other variables. The analysis demonstrated that the obtained square root of the AVE for the independent learning curriculum was 0.790, exceeding its correlations with local culture (0.639), social attitudes (0.631), motivation (0.694), and creativity in learning (0.749). Overall, the square root of the

AVE for the research variables outperformed their correlations with other variables, confirming discriminant validity validity as the description of table 3 and 4 below.

**Table 3** Cronbach’s alpha, composite reliability, and average variance extracted.

No	Variables	Cronbach’s Alpha	Composite Reliability	Average Variance Extracted (AVE)
1	Independent Learning Curriculum	0.880	0.909	0.624
2	Local Culture	0.888	0.923	0.749
3	Social Attitudes	0.885	0.915	0.684
4	Motivation	0.887	0.912	0.598
5	Creativity	0.926	0.942	0.732

**Table 4** Square root value of the AVE and correlation between variables.

No	Variables	Independent Learning Curriculum	Local Culture	Social Attitudes	Motivation	Creativity
1	Independent Learning Curriculum	0.790	-	-	-	-
2	Local Culture	0.639	0.866	-	-	-
3	Social Attitudes	0.631	0.719	0.827	-	-
4	Motivation	0.694	0.702	0.707	0.773	-
5	Creativity	0.749	0.777	0.778	0.766	0.855

**3.3. Inner Model Evaluation**

Partial least squares (PLS) analysis is a variance-based structural equation modeling (SEM) method designed to test theoretical models, with a focus on predictive studies. Consequently, various measures, such as R-square and Q-square, have been developed to assess the model's validity.

The R-square statistic measures the proportion of variance in endogenous variables explained by other exogenous/endogenous variables in the model. Qualitatively, R-square values are interpreted as follows: 0.19 (low influence), 0.33 (moderate influence), and 0.66 (high influence). The results presented in Table 5, indicate that the combined influence of the independent learning curriculum, local culture, social attitudes, and motivation accounts for 63.50% of the variance (high influence). Furthermore, the collective influence of the independent learning curriculum, local culture, social attitudes, motivation, and learning creativity amounts to 77.50% (strong influence).

**Table 5** R-square and Q-square values.

Variables	R-Square	Q-Square
Motivation	0.635	0.918
Creativity	0.775	

Q-square measures predictive accuracy, revealing how effectively each alteration in exogenous/endogenous variables can forecast endogenous variables. This metric is a partial least squares (PLS) validation tool used to gauge the model's predictive relevance. A Q-square value exceeding 0 signifies the model's predictive relevance. The Q-square value for the PLS model is computed via the following formula.

$$Qsquare = 1 - (1 - R_1)(1 - R_2) = 1 - (1 - 0.635)(1 - 0.775) = 0.918$$

Based on the findings presented in Table 5, the PLS model's Q-square value is 0.918, which is greater than 0, indicating a high level of prediction accuracy. Thus, variations in the independent learning curriculum, local culture, and social attitudes are highly predictive of changes in motivation and creativity in learning.

**3.4. The Scheme Illustrating the Interrelationships among the Research Variables**

The independent learning curriculum (X1), local culture (X2), and social attitudes (X3) have a direct effect on the enhancement of motivation (Y1). Additionally, the independent learning curriculum (X1), local culture (X2), social attitudes (X3), and motivation (X4) directly affect creativity (Y2). The motivation variable (Y1) is a pivotal mediating factor, that mediates the indirect influence of the independent learning curriculum.

**4. Discussion**

The research findings and data analysis indicate that implementing independent learning curriculum with critical elements such as constructivism, inquiry-based learning, learning communities, modeling, authentic assessment, cognitive understanding, and the Pancasila student profile positively impacts student motivation (H1) with a path coefficient of 0.327, the T statistic value obtained is 4.566 > 1.96 and p-value 0.000 < 0.05 (significant). The Merdeka Curriculum which prioritizes student-focused learning and teaching tailored to individual needs, is in line with the principles of active learning, which in turn has a positive impact on student motivation (Amiruddin at al., 2023). This suggests that the more comprehensively the independent learning curriculum is applied, the more likely it is to enhance students. A detailed examination of the



measurement model for independent learning curriculum implementation highlights that the indicator related to learning communities has the most decisive influence, reflected in the highest estimated loading factor value. This underscores the critical role of learning communities in fostering an engaging and effective learning environment. According to the feedback from respondents, teachers are instrumental in cultivating these learning communities, encouraging active participation, and promoting interdisciplinary learning opportunities. Teachers support high-achieving students and attempt to engage and uplift low-achieving students through tailored approaches. While high-achieving students are frequently rewarded for recognizing their performance, strategies are also implemented to develop the potential and achievements of lower-performing students, demonstrating a holistic approach (Chiew, 2015) as the F0igure 2.

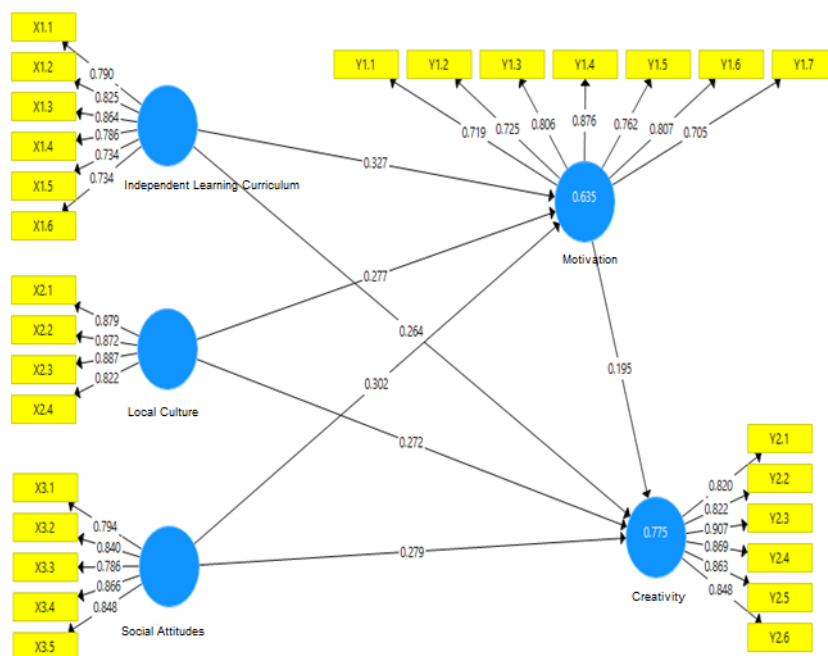


Figure 2 Schematic representation of the relationships among the research variables.

The assessment of respondents' perceptions and data analysis revealed that local culture, characterized by human interaction, interactions with others, interactions with the environment, and interactions with the divine, has a direct, positive, and significant impact. Notably, the majority of the respondents effectively implemented local culture. The research findings on motivation demonstrate that local culture has a direct and significant effect (H2) with a path coefficient of 0.277; the T statistic value obtained was 4.135 > 1.96 and a p-value of 0.000 < 0.05 (significant). Project-based assessments incorporating local culture have significantly contributed to the advancement of science education at the basic education level, enhancing the overall quality of the learning process (Parmiti et al., 2021). This suggests that enhancing local culture can lead to increased motivation. Based on the measurement model testing of the local culture variable, indicators Y such as human interaction with others and the environment contribute dominantly to the highest estimated loading factor values. This is reflected in the respondents' answers regarding the critical role of social beings, who always need assistance from others in carrying out daily life within their environment. Humans are ecological beings who cannot live without the universe, water, air, forests, seas, soil, and all biota: fauna and flora in nature. This means that human life will always depend on nature and interact with the environment. Local values that arise from specific experiences, which have the potential to influence glacier decline, represent more than mere material phenomena. They have profound implications for the self-perception of local communities and the significance they attribute to their interactions with the surrounding environment (Allison, 2015).

The research findings and data analysis revealed that social attitudes—characterized by honesty in speech, discipline, responsibility, self-confidence, and concern—directly, positively, and significantly influence motivation (H3) with a path coefficient of 0.302, the T statistic value obtained was 4.135 > 1.96 and a p-value of 0.000 < 0.05 (significant). Moreover, discipline, responsibility, self-confidence, and concern in education assisted by augmented reality (AR) produce more positive motivation among students and lead to higher academic achievement than traditional education (Carbonell, 2017). This implies that enhancing social attitudes can lead to an increase in motivation. Upon testing the measurement model of social attitudes, the indicator of responsibility emerges as the most dominant contributor with the highest estimated loading factor value. This is reflected in respondents' views regarding students' sense of responsibility in school, which encompasses individuals' actions in fulfilling their duties and obligations toward themselves, the environment, society, school, the Almighty, and the state. Students exhibit high motivation to undertake actions related to their responsibilities and to fulfill tasks assigned by teachers,





such as creating relevant assignments. Teachers can design tasks pertinent to students' lives, such as assignments concerning their future careers or the future of their country, to foster innovative ideas in learning (Christopoulos et al., 2021).

The research findings and data analysis indicated a significant influence of implementing the independent learning curriculum, characterized by constructivism, inquiry-based learning, learning communities, modeling, authentic assessment, cognitive understanding, and the Pancasila student profile, on creativity (H4) with a path coefficient of 0.264, the T statistic value obtained was  $4.387 > 1.96$  and a p-value of  $0.000 < 0.05$  (significant). This suggests that an increase in the implementation of the independent learning curriculum leads to increased creativity (Carbonell et al., 2017). This study emphasizes teacher support, collaborative opportunities, and access to technology and resources to improve the effectiveness of blended learning and self-directed learning practices (Dwiputra, 2023).

The assessment of respondents' perceptions and data analysis revealed that local culture, characterized by human interaction with oneself, others, the environment, and the divine, has a direct, positive, and significant influence. Notably, the majority of the respondents effectively implemented local culture. The research findings regarding creativity support the idea that local culture directly and significantly affects motivation (H5) with a path coefficient of 0.272; the T statistic value obtained was  $3.634 > 1.96$  and a p-value of  $0.000 < 0.05$  (significant). This suggests that enhancing local culture can result in increased creativity (Ramadhani et al., 2020). Based on the measurement model testing of the local culture variable, indicators such as human interaction with others and the environment make a dominant contribution, with the highest estimated loading factor values. This is reflected in respondents' responses regarding the crucial role of humans as social beings who consistently require assistance from others in their daily lives within their environment. Humans are ecological beings who cannot survive without the universe, including water, air, forests, seas, land, and all biota: fauna and flora in nature. This implies that human life is inherently intertwined with nature and its surroundings.

Research findings and data analysis revealed that social attitudes, characterized by honesty in speech, discipline, accountability, self-confidence, and concern, directly, positively, and significantly impact motivation (H6) with a path coefficient of 0.272, the T statistic value obtained was  $3.634 > 1.96$  and a p-value of  $0.000 < 0.05$  (significant). Skills and knowledge gained through students' interactions with the physical world, including social skills, cultural competence, discipline, accountability, self-confidence, and character development, play a significant role in shaping their motivation (Saripudin et al., 2021). Enhancing social attitudes can lead to increased motivation. Based on the measurement model testing of the social attitude variable, the accountability indicator demonstrates a dominant contribution with the highest estimated loading factor values. This is reflected in respondents' responses regarding students' sense of responsibility in school, encompassing their actions in fulfilling duties and obligations toward themselves, the environment, society, school, the most pleasant environment, and the nation. Furthermore, students are highly motivated to fulfill commitments and complete tasks that teachers assign, such as completing relevant assignments. In this case, teachers can design tasks pertinent to students' future careers or tasks related to the future of their nation, enabling teachers to foster innovative ideas in learning.

The research findings and data analysis revealed that motivation, as perceived by individuals, elucidates the desired aspects of creative personality (H7) with a path coefficient of 0.272, the T statistic value obtained was  $3.634 > 1.96$  and a p-value of  $0.000 < 0.05$  (significant). Research on the relationship between motivation and creativity offers opportunities to design relevant and adaptive educational approaches. These approaches can be tailored to individual needs, fostering motivation that encourages the exploration of new ideas, innovation in problem-solving, risk-taking, and the optimal development of creative potential (Agnoli et al., 2018). This implies that enhancing motivation can lead to increased creativity in learning, catering to the diverse needs of students, such as group discussions, question-and-answer sessions, demonstrations, and others. The identification indicator stands out based on the measurement model testing of the motivation variable. Children tend to be active in learning if they are rewarded by teachers. They are willing to perform tasks when guided and accompanied one-on-one by teachers.

Additionally, they are motivated to know if they have received good grades. These findings demonstrated the highest estimated loading factor values. This is reflected in the respondents' responses, which indicate pride in being a student, happiness in learning at school, and earnest efforts to uphold the school's reputation. They proudly state that the school is the right place to acquire knowledge.

The research findings and data analysis revealed that the implementation of independent learning characterized by elements such as constructivism, inquiry-based learning, fostering learning communities, modeling, authentic assessment methods, cognitive understanding, and adherence to Pancasila students significantly and positively impacts creativity in learning. This influence is mediated by motivation, suggesting that motivation acts as a mediator between the independent learning curriculum and creativity in learning (H8) obtained a path coefficient of 0.064 with T statistic  $3.198 > 1.96$  and p-value  $0.001 < 0.05$  (significant). Learning motivation serves as a mediating mechanism that explains the relationship between students' perceptions of the creativity of a technological environment and their attitudes toward a self-directed independent learning curriculum (Pan, 2020). Therefore, as the implementation of the independent learning curriculum increases, motivation also increases, ultimately leading to increased creativity in learning. This implies that implementing the independent learning curriculum, which directly impacts creativity in learning, will have an even more significant influence on creativity in learning when mediated by motivation. In the direct relationship, implementing the independent learning curriculum

significantly and positively affects creativity in learning. This effect is further bolstered when mediated by other variables. Consequently, the positive and significant impact of the independent learning curriculum on creativity in learning is reinforced when students exhibit motivation within the school environment.

The assessment results of respondents regarding the local culture variable revealed that most respondents adhered well to the local culture. Research findings and data analysis demonstrated that local cultural indicators such as human interaction with oneself, human interaction with others, human interaction with the environment, and human interaction with the divine indirectly influence creativity in learning mediated by motivation (H9) obtained a path coefficient of 0.054 with T statistic  $2.508 > 1.96$  and p-value  $0.0012 < 0.05$  (significant). Local cultural values and encourage active student involvement, enabling the transfer of knowledge to real-life problems while fostering creativity and motivation in learning (Yorman et al., 2023). This implies that motivation can mediate the influence of local culture on creativity in education. Thus, an increase in local culture can lead to heightened motivation and, consequently, enhance creativity in learning.

The research findings and data analysis revealed that social attitudes, characterized by honesty in speech, discipline, responsibility, confidence, and concern, indirectly influence creativity in learning, which is mediated by motivation (H10) obtained a path coefficient of 0.059 with T statistic  $2.644 > 1.96$  and p-value  $0.008 < 0.05$  (significant). Aspects of attitudes, students' motivation towards creative activities, including motivation for creativity, concerns, growth mindsets, and creative self-confidence, as captured by previous studies conducted in a particular cultural context have an indirect influence (Zhang et al., 2021). These findings suggest that motivation serves as a mediator between social attitudes and creativity in education. Hence, enhancing social attitudes can increase motivation and, consequently, heightened creativity in education.

## 5. Conclusions

This examination concerns the enactment of the independent learning curriculum, the incorporation of local culture, the manifestation of social attitudes, the stimulation of motivation, and the fostering of creativity in the learning environment within senior high schools in Bima Regency. After thorough analysis, the study delineates the following outcomes for each respective variable: (a) the independent learning curriculum, with an average score of 125.57, indicating a favorable rating (good); (b) local culture, scoring an average of 124.63, similarly deemed favorable (good); (c) social attitudes, with an average score of 124.98, also falling within the favorable range (good); (d) motivation, scoring an average of 125.18, also classified as favorable (good); and (e) creativity in learning, with an average score of 125.67, maintaining a positive rating (sound).

The empirically validated theoretical model, delineating the interplay among variables influencing creativity in learning, exhibits robust predictive ability. This is underscored by the Q-square value of the PLS model, which registers at 0.918, surpassing the threshold of 0, thereby affirming its high predictive accuracy. Notably, alterations in the implementation of the independent learning curriculum, local culture, and social attitudes are anticipated to correspond significantly with fluctuations in motivation and creativity within the learning context. Consequently, the model derived through PLS–SEM analysis emerges as a fitting tool for predicting motivation and creativity in learning environments.

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Moreover, the constructive feedback provided by the staff members contributed significantly to refining the research instruments, allowing for a more accurate assessment of the variables under investigation. The author profoundly appreciates their dedication and professionalism, making the data collection process efficient and effective. Without their assistance, this research would not have been possible, and the author is genuinely grateful for their invaluable contributions.

## Ethical considerations

This study was conducted in strict accordance with ethical guidelines to ensure the rights, dignity, and welfare of all participants involved in the research

## Conflict of Interest

The authors declare no conflicts of interest.

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