



LITERACY AS A STRATEGY FOR ECONOMIC EMPOWERMENT OF NIGERIANS FOR ACCOMPLISHING THE 17TH GOAL OF SUSTAINABLE DEVELOPMENT

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ABSTRACT

Literacy education remains a fundamental instrument for promoting economic empowerment and sustainable development in contemporary societies. This paper examines the role of literacy education as a strategy for economic empowerment and sustainable development, with particular emphasis on Nigeria. The study adopts a conceptual and descriptive approach, drawing on existing literature, policy documents, and empirical evidence on literacy, empowerment, environmental sustainability, and waste-to-wealth initiatives. The paper argues that widespread illiteracy contributes significantly to poverty, unemployment, social vices, environmental degradation, and underdevelopment by limiting citizens' access to knowledge, skills, and opportunities for productive participation in society. It highlights literacy education as a catalyst for raising awareness, enhancing critical thinking, developing vocational and entrepreneurial skills, and promoting responsible utilization of human and natural resources. The paper further demonstrates how literacy education can facilitate economic empowerment through functional and vocational training in waste recycling, environmental conservation, mushroom cultivation, compost production, paper manufacturing from agricultural residues, plastic recycling, and other income-generating activities. These initiatives not only create employment opportunities and improve livelihoods but also contribute to environmental sustainability through resource conservation and waste reduction. The study concludes that literacy education is indispensable for achieving sustainable development, reducing poverty, promoting environmental stewardship, and enhancing social stability. It recommends increased investment in literacy programmes, strengthened collaboration among government agencies, private organizations, and civil society groups, and the provision of adequate infrastructure, training facilities, and technological support to promote lifelong learning and economic self-reliance. The paper emphasizes that literacy is the cornerstone of meaningful development and a critical tool for achieving sustainable economic growth and environmental sustainability.

Keywords: Literacy Education, Economic Empowerment, Sustainable Development, Environmental Literacy.

Introduction

Literacy is the keystone which must be attained before any meaningful development can take place. In other words, literacy education is the instrument for harnessing community resources for sustainable development. A people who suffers from ignorance or lack of awareness will be backward in development activities. It should be noted, that change in people's life is largely a learning responsibility. Literacy Education is the key variable in raising consciousness spreading understanding and providing the necessary skills, including the human and material resources for social, economic, political and cultural development of



the community. Illiteracy is an obstacle to process and personal fulfillment of man, Ezimah (2014). Widespread illiteracy severely hampers economic and social development, it is also a gross violation of basic human right to learn, know, and communicate. Lack of awareness and information among people might involve them in social vices such as excessive smoking and drinking, uses of illicit drug, early sexual activity, kidnapping, terrorism, fraud, cultism etc. Different measures and strategies have been adopted to checkmate these social vices in the country today like Boko Haram and herds-men menace, human sacrifice and ritual killing, prostitution, human trafficking, cultism, kidnapping, armed robbing etc. These strategies include the establishment of correctional centers, independent corrupt practices and other related offences commission (ICPC), Economic and Financial Crime Commission (EFCC) and others.

All these measures adopted seem not to have yielded the expected outcome due to lack of awareness and high rate of illiteracy among the citizenry people engage in blood money to riches through the back-door, you don't sleep with their eyes close nor travel on the road freely without having increased heart-beat. The high rate of illiteracy account mostly for these terrorism in the country today. It has also deprived us of peace, growth and development. It is in light of the above that Nyerere (1967) stressed that "people cannot fully participate in developing the country as free citizens, if they are ignorant of their rights and obligations how can ignorant people learn from their fellow men or from the past... There is danger that ignorant people could become slave of their environment". In Omang & Ulayi (2025) UNESCO (2022) posits that over 60 million adults' lacks basic literacy skills, making Nigeria home to the largest population of illiterate adults in sub-Saharan Africa.

It is therefore hope that with literacy education, people could be liberated from shackles of ignorance, economic and all types of slavery. Literacy education will equip the individual with the knowledge, skills and attitudes for economic empowerment and sustainable development. It is in light of the above that this paper seeks to examine the extent to which literacy education could be employed as a strategy for economic empowerment and sustainable development in order to increase peace and tranquility.

Literacy

Literacy is a way of thinking which allows individuals to speak, listen, read and writes set of beliefs or ideas (Socratica Foundation, 2019). Literacy has been considered as one of the strongest predictors of individual all-round success. It allows people to finish schooling and secure jobs all around the world (Socratica Foundation, 2019). Literacy also has the power to impact individual wellbeing and increases life satisfaction. Literacy is a social construct, a complex idea that means different things to different cultural groups at different times. Therefore, literacy is a relative term and dynamic. While literacy is popularly understood to denote the ability to read and write prose and other print texts, it is an integrated complex of language and thinking process and skills, incorporating a range of habits, attitudes, interests, and knowledge, serving a range of purposes in different contexts.

Some Scholars in the field of literacy have stress that the term "literacy" can no longer be simply defined in terms of reading, writing or numeracy nor can it be seen as an end in itself (UNESCO, 2015). The rapid changes in science and technology suggested that "people must be able to adapt continually to developments in science and technology and to the pressures of social integration, participation and democratisation" UNESCO, 2015). This indicated that the world is more visual than before so that understanding images is just as important as understanding words, consequently more skills are demanded. Moreover, in parallel with the needs of society, literacy has to be seen as a tool of learning throughout life. If the criteria of



being literate are raised according to this definition, it cannot be imagined how many people in the world will be categorized as illiterate.

Eheazu (2016) commented on the environmental literacy in curbing the problems associated with environment. Literacy has innumerable and diverse functions, on specific needs of individuals, groups or nations. Mastering literacy is the essential foundation for developing an individual for lifelong learning especially in our globalized world. Literacy is a fundamental human right; it is essential and central for achieving numerous development goals Akpama (2017). The essence of literacy education is to equip adults with knowledge, skills and attitudes for the sustainable or judicious use of natural and man-made resources. Kujoh et al., (2025) posit that negative modifications have taken place on the environment due to farming practices, increasing human population, lack of awareness, destructive environmental practices, poverty, greed and the need for development which is adversely affecting the earth's environmental resources. The earth's carrying capacity is threatened by man's gluttonous or unbridled exploitation of the natural resources. Literacy education gives the awareness and ability to create situations that enhance the maintenance of essential ecological process and life-support system, preserving genetic diversity, ensuring sustainable utilization of species and the ecosystem for sustainable development. Helen et al (2025) asserts that building digital literacy through social work education enhances sustainable development. Emmanuel et al (2025) sees value education curriculum in secondary schools as a tool for sustainable development in Nigeria. All these lead to environmental preservation and longevity of the earth. Nigeria and other countries need very urgently adequate dosage of environmental literacy to empower people on how waste could be transformed into manure, fuel, papers etc. through recycling and restoring our natural resources in our environment Anijah-obi (2015).

In Godwin et al. (2024) posits that environmental adult education will help individuals and social groups acquire social values and ethics, strong feelings of concern for the environment and motivation for actively participating in the protection and improvement. According to her, attitudinal change encourages individuals to emphasize the care for the environment so as to engender lasting environmental friendliness with change of attitudes towards nature and where other forms of lives plants and animals is respected. Augustine et al (2025) sees community environmental education as a significant instrument for environmental protection. Widespread illiteracy severely hampers economic and social development, it is also a gross violation of basic human right to learn, know and communicate. UNESCO's (2015) definition goes beyond just reading and writing short statements. Literacy programmes would embrace, or be related to, modern developmental activities within which man in society, both literate and illiterate function (Omojuwa 2012) in (Anija-Obi 2015) no wonder president Nyerere of Tanzania in his speech on the ARUSHA Declaration 1967 said:

People cannot participate in developing their country as free citizens if they are ignorant of their rights and obligations and of the policies of their own country. Nor can ignorant people learn from their fellow men or from their past and correct and adapt their plans accordingly.

What Nyerere has said in effect is that given a literate population, development can be greatly accelerated and to overcome ignorance; people have to be taught and encouraged to read and write as well as to develop and use their intelligence and knowledge. Literacy is the keystone which must be attained before any meaningful development can take place. In other words, education is the instrument for harnessing community resources for development.

Sustainable Development

According to the Brundtland report (2014), Sustainable development is economic development which meets the needs of the present generation without compromising the ability of future



generations to meet their own needs (WCED, 2018). The sub-committee on Ecology and environmental protection of Nigeria vision 2010 committee recommended a process which complements the Brundtland commission's definition of sustainable development strategy. Ndukwe (2010) describes it as; the process of change in which the exploitation of resources; the direction of investment, the orientation of technological development, and institutional changes are all in harmony, and it thus attempt to provide economic development, human development, and environment with the way balance can be achieved. Agnes et al (2025) behavioral and contextual predictors of sustainable crop farming among rural farmers enhances eco-friendly practice.

From the above, it is evident that the focus of sustainable development is on the twin issues of environmental protection and economic development. In essence, the process of present development should entail the preservation of existing resources for future generations. This implies that, sustainable development is the satisfying of our present needs without compromising the ability of the future generation to meet their own needs. Therefore, we must not carelessly, greedily and recklessly exploit the available resource in order not to stifle the present tempo of development as well as compromise meeting the needs of future generations. Sustainable development has three main components; environment, society and the economy, the well-being of these three areas is intertwined and interwoven. For example; a healthy environment to provide funds and resources, safe drinking water, and air for its citizens (Akpama 2017). Ubana et al (2025) asserts that provision of rural water services promote community development and ensures environmental protection.

Empowerment

The term empowerment is derived from the word power. To empower means to give authority to enable a person or group of persons to gain power. According to World Bank (2018), empowerment is the process of enhancing the capacity of individuals or groups to ample choice and to transform those choice into desired actions and outcomes. Adebola (2014) defined empowerment as a person's ability to take active control of one's life in terms of being well informed and equipped with education, finance and relevant skills to take decisions without any external influence. Griffari and Sharman (2019) in that view defined empowerment as a degree to which or a process in which the marginalized groups define their own needs and determine the response that is made to them. The main focus here is to empower citizens to develop their own potentials and contribute meaningfully to the development of their communities and the society at large. Thus, an empowered citizen is one, who experiences self-confidence and self-reliance in his or her socioeconomic and political activities positively and gain control over their situations. The main purpose attached to literacy is to develop in individuals the knowledge, skills, attitudes, and behavior considered desirable in the society. Thus empowerment is the process whereby the citizens can be enhanced through functional literacy education which could enable them improve their living standard and participate actively in the socioeconomic and political development of communities in which they live.

The concept of empowerment is now widely used in a number of disciplines, lines to characterize states and social process of individuals and communities. It is broadly defined as power control over one's own life and over resources and agency capability to originate and direct actions for given purpose and self-determination in people and in communities in order to enable them to represent their interest in a responsible self-determined way, acting on their own authority".



Economic Empowerment

Economic empowerment cuts across gender and tribe. Economic empowerment is central to realizing human right, women's right and gender equality. People economic empowerment is their ability to participate equally in existing markets; their access to and control over productive resources, access to decent work control over their own time, lives and bodies and increase voice, agency and meaningful participation in economic decision making at all levels from household to international institutions (UN Women, 2018). According to women economic empowerment issues paper (2021). Economic empowerment is the capacity of women and men to participate in, contribute to and benefit from growth process in ways which recognize the value of their contributions, respect their dignity and make it possible to negotiate a fairer distribution of the benefits of growth. Economic empowerment increases people's access to economic resources and opportunities including jobs, financial services and property and other productive assets, skills development and other relevant information. World consumption and production is a driving force for the global economy which rest on the use of the natural environment and resources in a way that continues to have destructive impact on the planet. Economic and social progress over the last century has been accompanied by environmental degradation that is endangering the very system on which our future development depends. Sustainable Consumption and Production (SCP) is about doing more and better with less. It is also about decoupling economic growth from environmental degradation, increasing resources, efficiency and promoting sustainable lifestyle (UNEP, 2019). Ntongha and Ubana (2026) asserts that environmental education is a potent tool to national development.

Natural disasters are a clear example of people living in conflict with the environment. Disasters cause human, social and environmental losses and sometimes even threaten geopolitical stability, as in many less developed countries. They are also problem of global concern even when damage is local, the mechanism are often dependent on meteoric-climatic circulation (Ricardo, 2014). Losses frequently affect several countries as could be seen in the floods in central Europe in 2022.

Literacy plays a vital role as a strategy for economic empowerment for sustainable development; we have huge resources un-tapped which is waste recycling. Most countries generate huge amount of money from waste recycling if people could be educated on how such waste material could be recycled. Literacy education that play a significant role sensitizing and helping people to acquire wealth through waste recycling. Functional literacy and vocational literacy could be adopted to equip the people on waste recycling activities. The role of literacy education is to educate and enlighten people on how to recycle waste materials and transform into meaningful and useful products. Recycling industry is seen to provide substantial opportunities for job creation in Ulayi (2024) observed that recycling has multiparous benefits. The number of greenhouses and carbon emissions would decrease due to the process of recycling. In addition to understand how adult learners acquire AI and translate it into workforce adaptability, it is essential to consider both the cognitive determinants of technology adoption and the experiential processes of adult learning (Acha et al., 2026). Ubana et al (2025) opined that harnessing security approach and artificial intelligence (AI) as tools to combat corrupt/unethical practices. Andong et al (2025) sees games and simulations as method for adult education environmental management Helen et al (2025) affirms that evaluating the effectiveness of digital learning platforms enhances adult literacy skills acquisition in rural communities . According to Alka and Umesh (2016), waste could be converted into fuel and diesel. They invented the process to convert waste plastic into useful products like furnace oil and Liquefied Petroleum Gas (LPG). The process is based on the principle of random depolymerisation and involves selective breaking of bonds. Both plastics and petroleum derived fuels are hydrocarbons. However, the plastic molecules have longer carbon chains than



those in Liquefied Petroleum Gas (LPG) petrol and diesel fuels. Therefore, it is possible to convert waste plastic into fuels. The process is a thermal selective splitting reaction of the large molecular weight polymer carbon chains under an oxygen free environment and produces small molecular weight molecules.

Output from 1kg of Plastic

Name of end product	Quantity	End users
Liquid hydrocarbons	600 – 800g	Agricultural pumps O.G. sets, boiler fuel, marine fuel (bunker), input feed for petroleum refineries, fuel oil
Coke	70 – 100g	Nearby industries using LPG in-house consumption.
Gas	Equivalent to produce net 2.25 units of electricity	Thermal power plant, metallurgical industries.

Input: Carry bags, broken buckets and chairs, PVC pipes, CDS, computer keyboard and other e-waste.

Also, Central Environmental Education (CEE) (2017) has developed the ‘polyloom which is a plastic weaving handloom that helps reuse and recycling of discarded plastic bags (polybags). The polyloom is used to produce plastic woven fabric with different designs, which is then used to tailor and create finished products like bags, pouches, bottle holders and others.

Global Insight (2008) carried out a study on the waste recycling plastic, Aluminum cans, waste papers and others. Recycling is seen to provide substantial opportunities for job creation within the waste sector. According to the findings, it was observed that plastic recycling makes up the biggest contribution, currently employing 40,000 people, followed by cans (37,000), glass (16,000) and then paper (12,600) Figure (13.8).

Aluminum can generate the most GDP and employment, per tons. There are significant opportunities for job creation in the recycling industry. Economic empowerment includes access to money, financial freedom, financial decision making power and financial literacy. The key stakeholders are the governments, corporate bodies, voluntary organizations and individuals should assist in mobilizing the necessary resources and setting up structures required for the efficient and effective delivery of literacy education within nations and across national boundaries. There should be structural framework in which all the providers can both make their individual contributions and also work cooperatively together, adequate staffing, provision of facilities for training and retraining in skill acquisition and also waste recycling.

Technology for Growing Oyster Mushrooms on Coconut Waste

The Indian Council of Agricultural Research (ICAR) (2017) developed a low-cost technology for cultivating of Oyster mushroom utilizing coconut waste such as leafstalk, bunch waste, leaflets etc. Coconut wastes are chopped to 5-7cm long pieces and soaked in water overnight. Excess water is drained off and substrates and sterilized by steam.

Pasteurization in an autoclave at 1.02 kg (m²) pressure for 1½ hours. The substrate is then filled in polybags and inoculated with spawn at 100g per bag containing 3 – 3.5kg substrate.

Sterilized rice brand is added at 5% as an organic supplement. The bags are incubated for spawn run in a mushroom house for 15 – 20 days. After the spawn run, the polythene cover is ripped open and the compact cylindrical bag is sprayed with water two or three times, daily. The first flush of mushroom fruiting bodies is ready in 5 – 10 days after opening of the bags. Three to four crops can be harvested from each bed. The technology is a source of employment and income for many teaming youths, women also serve as self-help groups.



Oil Palm Factory Waste for Mushroom Production

Indian Council of Agricultural Research (ICAR) 2017 carried another work on Oil palm factory waste mushroom production. During the process of oil extraction from oil palm fresh fruit bunches (FFB), oil palm bunch refuse and oil palm mesocarp waste are available in sterilized form. These materials have been proved to be ideal substrates for growing edible mushrooms like paddy straw mushroom (on FFB), Oyster mushrooms, summer white milky mushroom and summer white button mushroom (on mesocarp waste) either directly or after developing compost. Farmers living near the factory zone can take up cultivation of mushrooms as a small-scale industry within the premises of oil palm factory. It can provide regular income to rural population/farmers/women and youths involved in mushroom production thus improving their economic status. It also helps in eco-friendly disposal of oil palm factory wastes by utilizing for edible mushroom production and bioconversion of waste material into edible food, rich in high quality protein ICAR (2017).

Bio-compost fertilizers

Composting is an aerobic process that involve the biologically decomposition of the organic material which eventually produced carbon dioxide, water and heat. It is widely used as soil conditioners and soil fertilizers. The application of bio-compost as soil conditioner will increase the rate of plant growth during the photosynthesis and reproductive (Olanrewaju and Ilemobade, 2009).

Turning Corn Cob for Moulding Cups

Plates and others traditionally mud cups are prepared using red mud. Continuous depletion of source has affected the availability of this mud and consequently there is need to develop alternatives to fully or partially replace red soil in cups making. Corn cobs otherwise a waste product are utilized for making mud cup to convert this waste into value added product.

Procedures of Making Cup from Corn Cob

1. The corn cob powder is mixed in different, ratios with mud and cups are prepared by baking the molded cups in a direct fire.
2. Physical properties thermal properties and Newton's cooling constant of corn cob powered blended mud cups are measured for assessing the feasibility of partially replacement of mud by corn cob powder can be added up to 15% (w/w) and further addition reduced the physical and thermal properties of the cup (ICAR 2017).

Turning Citrus Waste (Peels)

Banana peels and water-melon peels non-edible portion of fruits into valued added. But such waste poses increasing disposal and potentially severe pollution problems and represent a loss of valuable biomass and nutrients but with technology transfer. These products are developed by using the white portion of water-melon and banana peels chopping them together, boiling, straining in sugar syrup for 10 minutes, mixing with three different colours and allow it for half an hour, drain it dry under the sun it is very rich in vitamin A, C, potassium and magnesium and it give good tasty with cakes, cookies, ice cream and sweets (ICAR 2017).

Transforming Corn/Maize Husk into Husk Paper Product

Nigeria as a nation is still highly agrarian in its economic outlook in spite of its heavy dependence on oil for her revenue. Yet her full potentials in agriculture are yet to be tapped into, especially the waste generated from agricultural related activities. The country has suffered from heavy deforestation in order to meet some basic needs that draw input from trees from the forest. She relies on paper products daily for her various private and public tasks because



she is yet to migrate sufficiently into electronic transactions with reduced paper needs. Most of the paper products are the outcomes of heavy deforestation to be manufactured from raw trees from the forest. The effect of this is heavy deforestation and desertification.

The Husk paper product as we have found out as an alternative means of reducing deforestation and improving sustaining our natural environment by producing paper products both for household and offices. You will no longer have to rely on paper products made from trees. Husk paper products is proud to present household paper product made from a unique material; Corn husks and stalks made using the same processes as paper products produced from trees, paper from corn waste is equally functional to current tree-based paper, without the detrimental effects to forests. Husk paper products provide an environmentally friendly alternative to help reduce heavy deforestation. The corn waste was pulped before it was transformed into paper products. It was pulped using the hand process to convert the corn waste into pulp. After the corn waste has been pulped, it was sent to a paper mesh to be shaped, pressed, and dried into size of paper required. Husk paper products, which is primarily, corn waste is usually disposed of by being burned in the fields, which causes CO and smog emissions that are known to be health and traffic hazards. The use of the corn waste will reduce the CO and smog emissions from this method of disposal (Agogo 2018).

Transforming Sachet Water Nylon into Pave Stones/Slabs

The process is as follows: Plastic is melted in a simple drum, often made from readily available oil drums, or thicker sheet metal that is specially welded together. It is vital that those involved in the melting process wear adequate safety equipment, including eye protection, breathing apparatus, gloves, overalls and safety boots. When all the plastic in the drum is melted into a thin liquid, it is ready to be mixed. Mixing – sand is then added and mixed with specially created mixing poles, until a smooth consistency is formed. The mixture must be kept moving to avoid burning. Moulding – The mixture is then poured into metal molds on a metal table, which are all greased with engine oil to prevent sticking. The mixture is compacted and smoothed using large trowels and a hand operated compactor, and the finished product is removed from the mould. Drying – completed products are placed in the sun to dry for up to 24 hours, after which they are ready to be used (Agogo 2018).

Transforming Arecanut Leaves/Palm into Disposable Plates and Spoons

The production of the disposable plates and spoons from areca leaves is the simplest, easiest and fastest waste to wealth production process. Areca leaf plates are product by nature. Areca leaf plates are perfect alternative to plastics/polymer-based products. The product transformation from raw stage to finish stage is a 100% natural mechanism, where fallen areca leaf is collected from farms. The sheath of the areca leaf cleaned and soaked in water for approximately 15 minutes and places the leaf in hydraulic dying machine (heater dying) for 30 to 40 secs to get proper finished plates. They are then compressed to different shapes using the correspondingly shaped machines. They are then packed as per the customer requirement (Agogo 2018).

Transforming Arecanut leaves into paper has the following advantages:

- It is eco-friendly, it preserves the forest from depletion, it is bio-degradable and compostable, it is light weight, sturdy and non-crushable, it is microwave and refrigerator safe, it holds liquid items for 4 hours without leakage, it is good for hot, wet and cool food items.
- This disposable can be used at any occasion like parties, buffets, picnics, outdoor catering, functions, food-joint small and big cities across Nigeria.



- It has market potentials of both local and international patronage. Each Areca leaf plates manufacturing unit can provide direct employment to many people and there is an indirect impact of creating employment for many others.

The role of literacy education as a strategy for economic empowerment for sustainable development cannot be over emphasized. They are multifarious skills acquired through literacy education that economically empower people. These include Fashion Designing, Computer skills, Hair dressing skills, Soap making, Zobo making.

Thus, an empowered man or woman is one, who experiences self-confidence and self-reliance in his her socio-economic and political activities positively and gains control over he or her situations. Through literacy raises the consciousness and equip them with skills to enable them participate actively and meaningfully to the social, economic and political developments of their communities and society empowering them through functional literacy education liberates them from ignorance, make them overcome poverty establish and reinforce democracy, enhance economic and social well-being, improve health and ensure food security in the society.

Conclusion

Nigeria has the potentials to become Africa's largest economy and a major player in the global economy by virtue of its rich human and material resources endowment: But much of its potentials have remained untapped. The paper has however documented proven processes which ensure the possibility of literacy as a strategy for economic empowerment for accomplishing the 17th goal of sustainable development. Literacy is the key variable in raising consciousness, spreading understanding and providing the necessary skills, instrument for harnessing human and materials resources for social, economic, political and cultural development.

Through literacy, people will be empowered to recycle waste, skills acquisition and many other activities. It is therefore incumbent on the government and other stakeholders to improve on our technological knowhow and enable environment to thrive. Government and non-governmental organizations must ensure that literacy education is held in high esteem to enhance peace. Development and environmental protection in Nigeria thereby boosting economic empowerment and accomplishing the 17th goal of the MDGs,

Recommendations

To address the challenges listed above the following measures should be put in place

1. The governments, corporate bodies, voluntary organizations and individuals should assist in mobilizing the necessary resources and setting up structures requires for the efficient and effective delivery of literacy education within nations and across national boundaries
2. They should be structural framework in which all the providers can both make their own individual contributions and also work cooperatively together adequate staffing, provision of facilities for training and retraining in Skills Acquisitions and for the common good of all the populace.
3. We should not forget that literacy is the keystone which must be attained before any meaningful development can-take place. Therefore, literacy education should be encouraged in all the nooks and crams of the society.



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