



Contemporaneity of Language and Literature in the Robotized Millennium

Vol: 1(5), 2019

REST Publisher

ISBN: 978-81-936097-3-6

Website: <http://restpublisher.com/books/ellrm/>

Exploring of Childhood Education and Development Using GRA Method

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Abstract:

Childhood Education and Development Childhood development stages are categorized into 5 areas which consist of a number of milestones that a child will attain. The areas of preschool development are socio-emotional, fine motor skill, gross motor skill, speech and language, and cognitive development for preschoolers Solid for lifelong learning and well-being and of the child to build a broad base Social, emotional, cognitive and physical needs It aims at holistic development. Childhood Education and Development is the Psychology stress less and enjoy the best Relational Analysis (GRA) method showing. GRA(Gray Relational Analysis) Method, Background variables, General teacher characteristics, ICT-related teacher characteristics, Attitudes towards ICT, ICT use in early childhood education Alternatives. Teachers' ICT competences, ICT professional development, General innovativeness, Teacher self efficacy, years of experience the evaluation parameters reached ICT use in early childhood education is got the first rank whereas is the ICT-related teacher characteristics are having the Lowest rank.

Introduction

Growth' refers to your baby's physical growth Indicates changes. It is your child's social, In emotion, behavior, thinking and communication skills Changes that occur are also. All of this development Parts are also connected, and each Dependent and affect others. Generally, there are five levels early childhood development are as follows newborn. Infant. Toddler. Preschooler. School-age child. Childhood from birth to 8 years experiences shape the development of the brain affect future learning, behavior and health It forms the foundation of everything. a strong the foundation is for children to become well-functioning adults development stages are categorized into 5 areas which consist of a number of milestones that a child will attain. The areas of preschool development are socio-emotional, fine motor skill, gross motor skill, speech and language, and cognitive development for preschoolers Solid for lifelong learning and well-being and of the child to build a broad base Social, emotional, cognitive and physical needs It aims at holistic development caring, competent and responsible prospective ECCE is an opportunity to develop citizens contains High quality early childhood education gives children the best start in life. It provides important opportunities to learn and develop. Early childhood education can help your child make friends, develop independence and learn new routines. It also supports their transition to school. Recent brain A child's development from birth to three years is the most Research indicates that critical years. Consider your child's early years here are some tips to consider: Child Development, Physical Developmental and intellectual, language, emotional and social Includes development. These features are often although considered individually; each actually affects everything else For example, and as the brain develops physically Intellectual abilities increase. Gray correlation analysis is a method of calculating the degree of gray correlation and determining the degree of influence between key behavior or system factors of the system. Various inputs to get better quality characteristics Relevant to determine the optimal level of parameters analysis (GRA) is used. Gray relational Analysis is a complex project In evaluating performance or Widely used in assessment.

Childhood Education and Development

Early childhood training is a departure from ethics and expository value. Finally, two alternative metaphors are suggested as viable lenses through which to view early adolescence curriculum content material: early formative years education as being concerned and early youth schooling as education for democracy. Early youth educators are requested to do not forget the capacity of those two metaphors to inform discourse about what to educate in early adolescence and fundamental college school rooms. "Care" and "early youth schooling as schooling for democracy" are lenses for focusing on curricular discourses—perspectives that I accept as true with have the capability to be ethically defensible and contribute to the development of curricula for young youngsters [1]. In early early life education, 'ICT use supports primary ICT abilities and attitudes' and 'uses ICT helping content and person gaining knowledge of needs. ICT use that helps fundamental ICT abilities and attitudes is frequent and is associated with preschoolers' fine, instructors' self-perceived ICT competencies and wide variety of reports with ICT in school. 'ICT use in sub-contents and character getting to know desires' is strongly related to preschool children's fine, teachers' self-perceived ICT abilities, ICT professional development and teachers' attitudes towards the opportunities of ICT for instructors in early youth education. This indicates that expert improvement is an vital thing in stimulating ICT use past teaching basic ICT talents and attitudes [2]. Early adolescence schooling policy in China turned into evolved in 2010. In light of the National Plan for Middle Ages and the Long-term Plan for Education

Reform and Development, the Chinese authorities has made non-stop efforts to sell the improvement of early adolescence training. . New guidelines consist of increasing enrollment in the three-yr early early life application; Clarifying the key obligations of governments to provide early formative years schooling; elevated funding for early youth training, (in particular for disadvantaged youngsters); instructor potential constructing; Strengthening application first-class and governance amongst different changes. Each province has developed a 3-year movement plan to put into effect the policy. The demanding situations of enforcing the brand new policy have been additionally mentioned [3]. There is a developing consensus that professional improvement (PD) is an essential lever for enhancing teaching exercise in early adolescence schooling (ECE). Teachers' reports with PD had been related to better lecture room satisfactory (Burchinal, Cryer, Clifford, & Howes, 2002), and a few researchers recommend that PD may be the most impactful manner to improve children's getting to know beyond a teacher's diploma or specific curriculum. Examination (e.G., Early et al., 2007; Preschool Curriculum Evaluation Research Consortium, 2008). Given the importance of PD to enhancing instruction in ECE, the sector wishes a higher understanding of what researchers are currently doing with PD to recognize the growing knowledge base and pick out gaps in expertise that want to be addressed [4]. However, it's miles clean that such hyperlinks exist: on the only hand, developmental psychology plays an essential role in research on early childhood schooling, and on the other hand, mother and father and instructors have ideas about infant development; Authors have found that knowledge about child improvement has a more impact on their paintings, and dad and mom' perceptions influence their behavior in front in their kids [10]. Parenting and early adolescence education, infant safety and social care businesses trusted the maximum recent systematic critiques and included new research as they became available. From idea to start, the point of interest of interventions is in the main on the maternal caregiver [6]. Early formative years schooling that ratings very well on NAEYC satisfactory standards. Everyone in France joins the Cola Mate on their knees, and society appears none the more severe for it. Big kids in France develop out of Ecole Maternelle and end up adults who are by using all appearances glad, morally a hit, economically a success, and democratic. Or as a minimum no longer much less than adults in Italy, England or the USA [7]. Early formative years education. Such trends also are visible in current curriculum and policy tendencies in early early life schooling (Stephen, 2010). In terms of environmental schooling, the improvement of environmental values is practically dominant now not handiest in early early life schooling but additionally in faculty schooling. However, a understanding-cost-motion hole has emerged in environmental schooling studies, with knowledge1 frequently considered the least common dominant within the teaching and gaining knowledge of of environmental schooling [8]. Nature and Environmental Education in Early Childhood The main groups for early early life training (National Association for the Education of Young Children) and Environmental Education (NAAEE) make a contribution to the importance of nature and environmental schooling in early youth. The National Association for the Education of Young Children posted a collection of articles within the highlight on younger kids and nature (Shilladi, 2011). And NAAEE (2010) published Early Childhood Environmental Mental Education Programs: Best Practices. These courses provide guidance for designing, imposing, and comparing developmentally suitable environmental training [9]. Early youth schooling can (and should) be concerned. In this text we can discuss a few factors of early youth training. The reality that early childhood training belongs to the larger training system method that international political and economic problems are worried while planning schooling for sustainability in pre-college, as in other education structures. Recent adjustments in Swedish training policy, characteristics in preschool coaching and the preschool baby as a sustainable learner are commented and mentioned [11]. Finally, the position of early adolescence training in addressing each aspect of emotional competence, thoughts for destiny research, and application issues are mentioned [5].

Background variables: Background variables are typically demographic characteristics such as age, gender, race, and parental income that researchers cannot manipulate. Also called "subject," "biological," "categorical," and "individual-difference" variables. General teacher characteristics: Some of the qualities of a good teacher are communication, listening, cooperation Skills in adaptability, empathy and patience. Other characteristics of effective teaching include engagement classroom presence, a value in real-world learning, is great changing practices and lifelong. ICT-related teacher characteristics:ICT for an ICT Competent Teacher or How to know everything about using Don't have to. However, ICT in subjects they are the best practices to use should be aware so that they are ICT competent can be improved. Attitudes towards ICT: Attitude towards technology Ideas and concepts that guide actions And in the case of thoughts and students learning process and May affect academic performance. ICT use in early childhood education ICT in preschool, kindergarten and early childhood including the use of communication and collaboration Learning and development in all key learning areas improves. As an early childhood teacher, understanding childhood language development. Teachers' ICT competences: Teaching practices in accordance with educational principles Implementation. Teaching and learning and assessment Integrate ICT into processes. Using ICT Create project-based learning activities. Various technical tools to solve the problem and use resources. ICT professional development: It helps teachers to use ICT to create better teaching process and enrich the knowledge of students. The use of ICT in training enables trainers to better prepare their lesson plans and deliver better ways to students in the classrooms. Jebremeskel et al. General innovativeness: Innovation is a domain, a product or update service and new processes by using, introducing new techniques by or successful in creating new value one that is renewed by establishing ideas is the process. Creating value a defining characteristic of innovation. Teacher self efficacy: Teachers' self-efficacy, i.e. their Duties and duties related to professional activities and teachers' ability to effectively deal with challenges Beliefs, important educational outcomes (e.g., student achievement and motivation) influence plays an important role in payment being in a working environment. years of experience: A year of experience is 1976 continuous hours refers to employment, in which the related under classification increment status and award In relation to an employer providing a similar service as the classification progresses so does experience.

Gray Relational Analysis (GRA)

The GRA approach became at the start developed by means of Deng and efficaciously applied to multi-attribute selection-making issues as a part of gray gadget concept, GRA is suitable for fixing issues of complex relationships among Several factors in the current literature and variables. Various A kind of GRA technique is proposed on this have a look at, we introduce an easy and green GRA approach [14]. Gray Relational Analysis (GRA) is MCDM helps with problems is a tool and First proposed with the aid of Deng. It has been correctly utilized in fixing diverse MCTM problems. GRA stands for an outcome evaluation model may degree correlation among collection and Records analysis method or Belongs to the geometric approach category Usually, researchers target They set up the series reference Scope of the research problem Based on Cont. Therefore, the goal of grey correlation evaluation technique is to degree the correlation among the reference collection and the contrast series [15]. Derived from Gray system idea, GRA is a quantitative method for figuring out the connection among sequences the usage of a limited amount of information. The primary The idea of GRA is that of series of curves styles closeness of relationship is primarily determined by The Series quantity is additive and vice versa. GRA two Complexity between factors and variables Ideal for solving problems with contacts. In solving various MCTMs It has been effectively implemented troubles consisting of worker choice [16]. Gray Correlative Analysis (GRA) and techniques for regulation alternatives through simulating the proper solution Both the techniques yielded the same gold standard The parameter level i.E. 10 μ m particle size, 5% reinforcement, 8mm diameter device, 710rpm velocity, 20mm/min. To become aware of the significance of the outcomes of 139.48N in-feed pressure, sixty-three.92N cross-feed force, forty-two.6N thrust force, sixty-eight.96oC temperature and zero.198 μ m floor roughness, each procedure on response parameters The impact of the variable is done. All although the parameters are encouraging parameters, whereas Speed became a less significant factor [17]. GRA (Gray Correlation Analysis) version. First at the grid, the neighbor of each charge Countries and their one-dimensional resonance Statistics by comparing indicators Skills count. 1D-LBP after receiving the signals, in those indicators Statistical settlements is calculated. These functions are GRA are classified using a perusal of the literature well-known shows that no such look at exist. The 1D-LBP technique changed into recently implemented Characteristic from vibration alerts First time to extract. Additionally, it is vibration signals in GRA Used for the first time in the category [18]. The Intuition mixed with vague synthesis The GRA method is a fuzzy set of decision makers since considering information, many standards of achievement for decision-making problems carries significant risk. Therefore, in fate, this method can be applied to handle Job Evaluation, Dealer Selection, Factory Location manufacturing structures and so on Inclusive multi-criteria decision-making Uncertainty in issues of areas of control choice issues [19]. GRA first interprets the overall All in comparative rankings Performance of alternatives. According to this called ash relative formation. According to these scenarios, a Super target sequence described. then, evaluate all Gary correlation coefficient in rows and A satisfactory target collection is calculated finally this gray contact based on the coefficients, the perfect target sequence and for each variant sequence of gray contact between The size is calculated. [20]. GRA proposes an incorporated GRA for distribution network and AHP technique reconstruction to plan hydropower technology. Particle reinforced stem Electric discharge apparatus GRA to improve the method Provide a sample fabric. Proposes GRA to estimate the relative have an impact on of fuel fee, gross domestic product variety motors and vehicle kilometers travelled to electricity growth. Taiwan uses the Fuzzy-GRA technique to assess the economic overall performance of box lines. Proposes an incorporated GRA approach for provider evaluation of environmental know-how management abilities. Examine and rank the energy performance of office homes the usage of GRA [21]. Gray correlation analysis (GRA) is commonly used in Asia. It is an outcome evaluation version, which On an absolute basis Similarity between rows or measuring diploma of distinction degree of dating. The motive of GRA is to have a look at elements that affect structures [22]. Gray Relational Analysis (GRA) is proposed as a way that may for sequences of the type Measure the correlation between facts evaluation technique or geometric pattern. Reason of GRA technique, primarily based on degree of similarity with interelements Degree of relationship. GRA there are few studies that have used Oil pipelines in gas wells of environmental factors on corrosion Assess the impact, principle of application of GRA Factors identified. With many overall performance characteristics Electro Discharge machining method GRA United States of America for an expatriate task the usage of GRA using a mixed GRA and technique for included water resource protection assessment in Beijing. Decided the pleasant layout aggregate of a product from elements to suit a given product picture represented with the aid of a phrase pair the usage of GRA, introduced GRA and proposed a brand new struggle reconstruction method of trust functions. Electrocardiogram (ECG) Heart Rate Discriminator proposed a technique to degree frequency components in distinct ECG beats the usage of GRA. GRA changed into proposed for prediction-integrated circuit outputs [23]. (GRA) is A system's reference/as pirational state (desired) factors and others for compared (alternative) factors Used to show the relationship between When a systems approach examines the degree of association for two alternatives using the distance measure between. For the GRA model Concepts with computational process are briefly reviewed [24]. GRA is a choice-making technique based totally on the grey gadget principle first developed by way of Deng in gray principle, wherein black represents a gadget with incomplete statistics, while a white gadget represents whole facts. However, the grey relation is associated with incomplete facts and is used to symbolize the degree of association between sequences, so that the gap of elements may be measured one by one. Gray evaluation enables to make amends for the deficiency in statistical regression while experiments are ambiguous or the experimental technique can't be carried out exactly [25]. GRA ph ALigner (C-GRAAL) between networks to increase the amount of aligned edges uses heuristics and primarily based on network topology. So, social, shipping or electric any kind involving networks It can also be used on a network. Eukaryotic and Prokaryotic PPI networks of species we use C-GRAAL to align and PPI networks between species, and the subsequent renovations are great Connected and functional topology technically aligned areas we show that we reveal. We are efficiently validating more than one prediction and

across biological specializations next to change Use alignments organisms. Furthermore, we display that PPI in humans to align networks C-GRAAL can be used pathogens host from network topology Pathogen with proteins It can sense patterns of interactions by myself [26]. Traditional GRA techniques fail to cope with incomplete weight information Intuition above with ambiguous MADM issues thrilling and vital research topic is a way to derive characteristic weights from each given intuitive fuzzy records and incompletely recognized characteristic weight statistics based at the fundamental best of the traditional GRA technique. For this reason, intuition is ambiguous to fix MADM problems GRA to develop a technique the concept of expanded statistics, wherein facts approximately characteristic weights are incompletely regarded, and attribute values [27].

Analysis and Discussion

TABLE 1. Manufacturing Environment

	Teachers' ICT competences	ICT professional development	General innovativeness	Teacher self efficacy	years of experience
Background variables	31.08	139.53	29.15	22.05	36.05
General teacher characteristics	29.12	142.97	33.69	27.30	6.00
ICT-related teacher characteristics	24.08	122.58	29.18	23.10	45.36
Attitudes towards ICT	23.17	128.28	24.60	17.59	34.00
ICT use in early childhood education	33.33	186.41	27.96	18.89	45.00

Table 1 shows the Childhood Education and Development for Grey relational analysis. Teachers' ICT competences, ICT professional development, General innovativeness, Teacher self efficacy, years of experience Background variables, General teacher characteristics, ICT-related teacher characteristics, Attitudes towards ICT, ICT use in early childhood education in this Alternatives or Evaluation value.

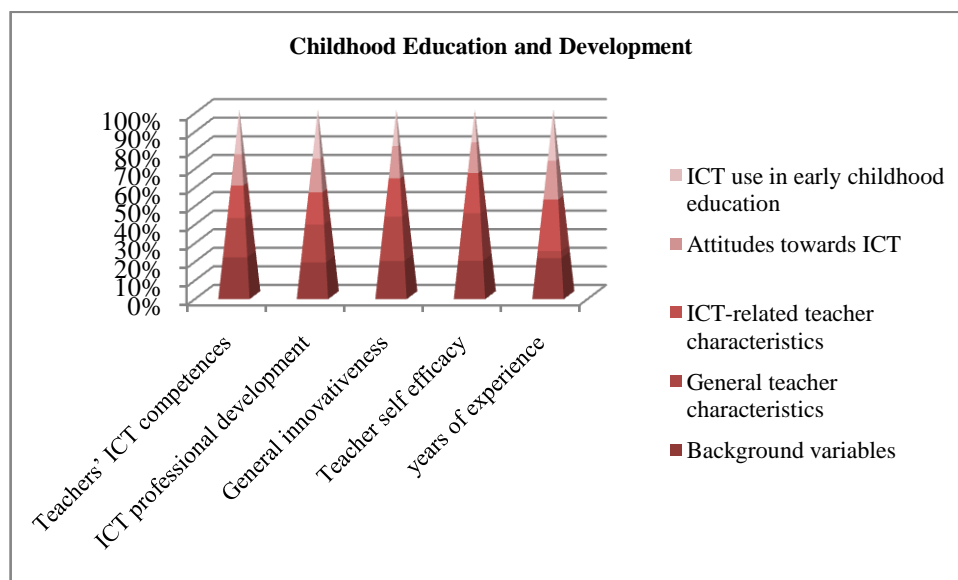


FIGURE 1. Childhood Education and Development

Figure 1 Shows the Manufacturing Environment for Grey relational analysis Load capacity, Repeatability, Maximum tip speed, Memory capacity, Manipulator reach and Cincinnati Milacron T3-726, Cybotech V15 Electric Robot, Hitachi America Process Robot, Unimation PUMA 500/600, United States Robots Maker 110 it is seen that United States Robots Maker 110 is showing the Highest Value for Load capacity and Unimation PUMA 500/600 is showing the lowest value. United States Robots Maker 110 is showing the Highest Value for Repeatability and Hitachi America Process Robot is showing the Lower value. Cybotech V15 Electric Robo is showing the Highest Value for Maximum tip speed and Unimation PUMA 500/600 is showing the lowest value. ybotech V15 Electric Robo is showing the Highest Value for Memory capacity and Unimation PUMA 500/600 is showing the lowest value. United States Robots Maker 110 is showing the Highest Value for Manipulator reach and Cybotech V15 Electric Robot is showing the lowest value.

TABLE 2. Normalized Data

Normalized Data				
Teachers' ICT competences	ICT professional development	General innovativeness	Teacher self efficacy	years of experience
0.7785	0.2655	0.2655	0.5407	0.2365
0.5856	0.3194	0.3194	0.0000	1.0000
0.0896	0.0000	0.0000	0.4325	0.0000
0.0000	0.0893	0.0893	1.0000	0.2886
1.0000	1.0000	1.0000	0.8661	0.0091

Table 2 shows the Normalized data for Childhood Education and Development. Teachers' ICT competences, ICT professional development, General innovativeness, Teacher self efficacy, years of experience Background variables, General teacher characteristics, ICT-related teacher characteristics, Attitudes towards ICT, ICT use in early childhood education it is also the Normalized value.

TABLE 3. Deviation sequence

Deviation sequence				
Teachers' ICT competences	ICT professional development	General innovativeness	Teacher self efficacy	years of experience
0.2215	0.7345	0.7345	0.4593	0.7635
0.4144	0.6806	0.6806	1.0000	0.0000
0.9104	1.0000	1.0000	0.5675	1.0000
1.0000	0.9107	0.9107	0.0000	0.7114
0.0000	0.0000	0.0000	0.1339	0.9909

Table 3 shows the Deviation sequence for Childhood Education and Development. . Teachers' ICT competences, ICT professional development, General innovativeness, Teacher self efficacy, years of experience Background variables, General teacher characteristics, ICT-related teacher characteristics, Attitudes towards ICT, ICT use in early childhood education it is also the Maximum or Deviation sequence value.

TABLE 4. Grey Relation Coefficient

Grey Relation Coefficient				
Teachers' ICT competences	ICT professional development	General innovativeness	Teacher self efficacy	years of experience
0.6930	0.4050	0.4050	0.5212	0.3957
0.5468	0.4235	0.4235	0.3333	1.0000
0.3545	0.3333	0.3333	0.4684	0.3333
0.3333	0.3544	0.3544	1.0000	0.4128
1.0000	1.0000	1.0000	0.7888	0.3354

Table 4 shows the Grey relation coefficient for Childhood Education and Development. Teachers' ICT competences, ICT professional development, General innovativeness, Teacher self efficacy, years of experience Background variables, General teacher characteristics, ICT-related teacher characteristics, Attitudes towards ICT, ICT use in early childhood education it is also Calculated the Maximum and minimum Value.

TABLE 5. Result of final GRG Rank

	GRG	Rank
Background variables	0.4840	4
General teacher characteristics	0.5454	2
ICT-related teacher characteristics	0.3646	5
Attitudes towards ICT	0.4910	3
ICT use in early childhood education	0.8248	1

Table 5 shows the Result of final GRG Rank of GRA for Childhood Education and Development. GRG Rank ICT use in early childhood education is showing the highest value for GRG Rank and ICT-related teacher characteristics is showing the lowest value.

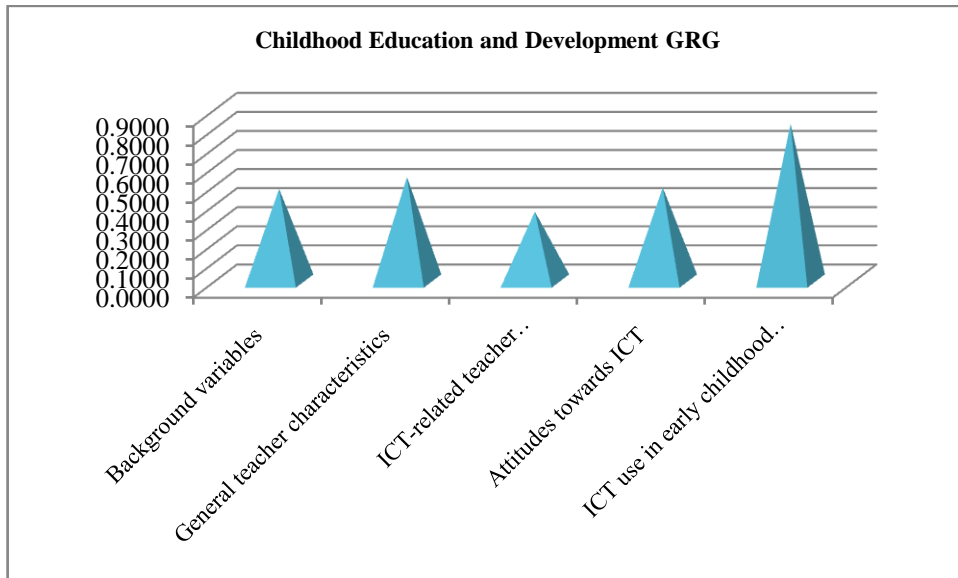


FIGURE 2. GRG

Figure 2 shows the GRG of GRA for Childhood Education and Development. GRG Rank ICT use in early childhood education is showing the highest value for GRG Rank and ICT-related teacher characteristics is showing the lowest value.

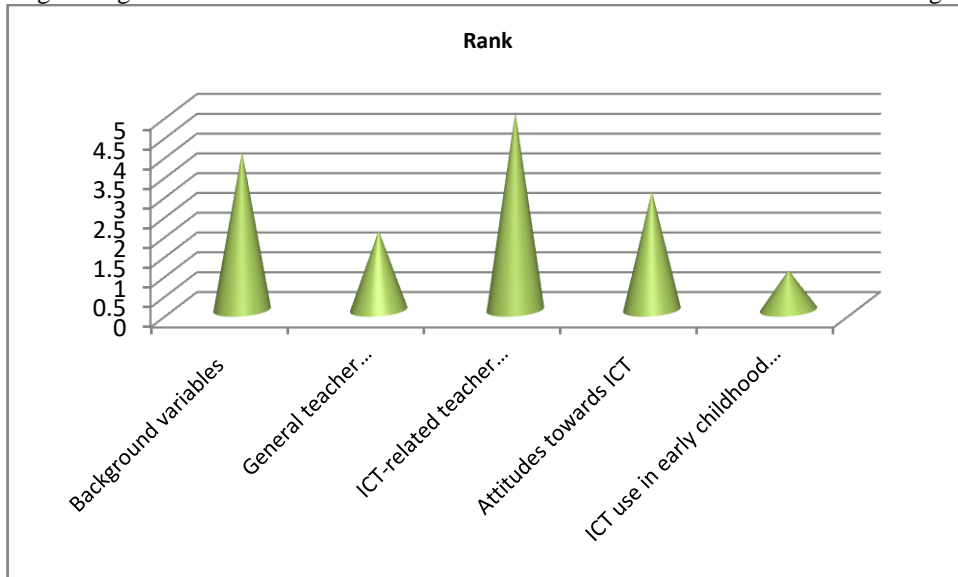


FIGURE 3. Shown the Rank

Figure 3 shows the Rank of GRA for Childhood Education and Development. ICT use in early childhood education is got the first rank whereas is the ICT-related teacher characteristics is having the Lowest rank

Conclusion

In Production environments, on heterogeneous computing platforms Between distributed manufacturing knowledge Diversity and incompatibility are in organizations and domains to achieve semantic interoperability There is still a big hurdle. Such diversity and distributed Knowledge sharing and reuse in manufacturing environments Systematics commonly known as ontologism this necessitates the use of a communication framework. Therefore, the application of manufacturing ontologism in a heterogeneous and distributed manufacturing environment is required, such as knowledge sharing and reuse The GRA technique turned into originally advanced by Deng and correctly implemented to multi-attribute selection-making troubles as a As part of the gray gadget policy Many in the existing literature between factors and variables GRA to resolve complex relationship issues appropriate. Various types of GRA method is proposed in this exam We have easy and green GRA technique Introducing GRA method, Cincinnati Milagron T3-726, Cybotech V15 Electric Robot, Hitachi America Process Robot, Unimation PUMA 500/600, United States Robots Maker 110 Alternatives or Load Capacity, Computational Steps for Solving Repeatable Multi-Attribute Decision-Making Problems Node Speed, Memory Capacity, the evaluation parameters reached by the handler. United States Robots Maker 110 is got the first rank whereas is the Hitachi America Process Robot is having the lowest rank

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