Innovative Tech-Enhanced Language Learning for Sustainability: Empowering Gifted Multilingual Children through IPOF-MI

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A R T I C L E   I N F O

A B S T R A C T

There is a growing portion of the population exhibiting extra "intelligence" these days all over the world. Some researchers indicate that bilingualism / multilingualism causes these kids to score higher on verbal and nonverbal IQ tests than other children; they will have a more diversified structure of intelligence and more flexibility in thought: greater cognitive flexibility, greater creativity, and greater divergent thought. This study was conducted to suggest IPOF Instructional Model for the gifted bilinguals / multilinguals based on MI Theory integrated with technology, which is composed of four processes; input, process, output, and feedback. In the first step, the relationship between the gifted/talented and bilinguals / multilinguals is made. In line with this, the interrelations between the gifted bilinguals / multilingual and MI Theory to various domains such as verbal, musical, mathematical, spatial, interpersonal, intrapersonal, natural, and kinesthetic bits of intelligence of the children are reviewed. In the second step, an IPOF technology integrated instructional model based on MI Theory is proposed for gifted bilingual/multilingual children in the Input – Process – Output – Feedback (IPOF) frame. In the third stage, the units are taught, and the questions of the students are answered. In this model, the teacher is not only teaching but facilitating the lesson for their students. With the formative evaluation, in this MI Theory-based approach, summative evaluation is used. After all the evaluation process is done, as the fourth stage, the teacher gets the feedback of the students' knowledge of the lessons. In MI Theory-based approach experiencing is important, so the teacher should create an authentic environment to let the students experience it. If something is practiced, then it means it has a meaning for the gifted bilinguals / multilingual and the teachers. If the results are satisfying the teacher should go to the next unit or if the results are not satisfying the teacher should go to the beginning of the model, and does the same thing from the beginning to the end.

Introduction

In the 21st century, education plays a pivotal role in addressing global challenges such as climate change, cultural conflicts, and social inequality Language learning, especially among gifted multilingual children, serves as a powerful medium to foster cross-cultural understanding, critical thinking, and global citizenship—key pillars of sustainable development. Gifted pluralingual (multilingual) children possess a unique combination of advanced cognitive abilities and linguistic sensitivity. Their aptitude for abstract reasoning, metalinguistic awareness, and flexible thinking positions them as future change agents in both

local and global contexts. However, traditional educational models often fail to adequately support the distinct needs of these learners, particularly when it comes to integrating technology, multiple intelligences, and sustainability principles into nstruction. In response to this gap, there is a growing need for models that offer personalized, technology-enhanced, and interdisciplinary education. This study introduces the IPOF-MI model (Input–Process–Output–Feedback based on Multiple Intelligences), designed to empower gifted multilingual learners through innovative, tech-integrated language education aligned with sustainability goals. Grounded in Howard Gardner's Theory of Multiple Intelligences (MI) and structured according to the instructional design framework of IPOF, this model seeks to nurture both the linguistic and socio-environmental competencies of learners. Technology, when meaningfully integrated, becomes not only a medium of instruction but a catalyst for creativity, collaboration, and critical engagement with real-world issues. Digital storytelling, virtual field trips, interactive simulations, AI-based language platforms, and global online communities are among the tools that can enrich the learning process for gifted multilingual children. The IPOF-MI model, therefore, is more than a pedagogical tool; it is a transformative approach that aligns language education, gifted education, and sustainability in an integrated, technologically enriched learning environment. It encourages learners to not only acquire language skills but to become responsible, globally minded individuals capable of acting thoughtfully in complex, interconnected societies. Over millions of children in any part of the world come from homes in which the language they have to communicate by is not their primary language. Often, they live in a community in which non-German, non-English, non-French, or non-Arabic language is the main means of communication. The migrant children in any part of the world have a bigger puzzle to solve than the monolingual one and they face a more difficult task than most of us (Mehler et al., 1988): They must master the native tongue of their family to communicate effectively at home, and they must also master the official languages such as, German, French, Italian, Russian or English to make their way in the society in which they are living (Kabadayi, 2008). Furthermore, in countries where the acquisition of multiple languages is an expected phenomenon, children must learn more than one language and speak all of them effectively (Mushi, 2002). In Germany for example, a Turkish young child having a mother of Italian origin is exposed to at least two languages within the family, Turkish and Italian. When the child starts schooling, German is emphasized as the medium of instruction, and English is introduced as a subject. By the end of primary years, children function effectively in three or more languages (Temel & Şimşek Bekir, 2005). In addition to this, it is clear that becoming bilingual and maintaining bilingualism, regardless of age, is a difficult process (Cummins, 2000). They have to learn the second language grammatical system which consists of the rules and principles that govern syntax (word order), morphology (word formation), and phonology (pronunciation), and that interface with principles of discourse, pragmatics, and semantic interpretation (MacSwan & Pray, 2005). In practice, this should mean that students develop academic proficiency in their first language before being expected to study cognitively demanding concepts and materials in their second language (Worthy and Rodríguez-Galindo, 2006). They should be defined as gifted and talented bilingual or multilingual children as they can speak, read and write two or more languages as well as a sound understanding of the cultures which are linked to Western and to Eastern ones even in a more difficult and complex situation. West (1980) and Nazarro (1978) have identified obvious characteristics of the verbally gifted and talented, such as reading avidly, writing frequently and fluently, and participating in oral communication activities. Moreover, they possess and demonstrate potential abilities that give evidence of high-performance capability in areas such as intellectual, creative, language, mathematics, social specific academic or leadership ability, or in the performing and visual arts. It can be inferred that there is a close relationship between gifted/talented and bilingual/multilingual children. There is a two-way process that the more intelligent child became bilingual and bilingualism aided his plural intellectual development. Therefore, it is inevitable to design an instructional model in language arts for gifted bilingual /multilingual children all over the world. The principles of the model may be applied to the development of language arts for gifted bilingual/multilingual students. The instructional model for the gifted bilingual/multilingual should not only give students a sound foundation in verbal, reading, and critical thinking skills but allow them to use these skills in an interdisciplinary fashion based on the plurality of the intellect (Scher, 1986; Peterson et al., 1992). The instructional model to be designed should be built upon the characteristics of the intellectually multilingual gifted. While all students need to develop "basic skills," gifted students can often acquire these as they develop their other, more advanced abilities. This article explores the stages of the IPOF-MI model in detail—starting with the ***determination of learner needs***, followed by the ***formulation of technology-integrated objectives***, *selection of meaningful, tech-supported content*, and finally, the ***implementation of the model in practice***. Through this framework, the study aims to contribute a replicable and adaptable model for educators and curriculum designers seeking to cultivate sustainable competencies in gifted

multilingual learners through innovation and inclusive education.

Literature Review

Research evaluation of bilingualism has led to the conclusion that bilingualism does not interfere with performance in either language (Hakuta & Garcia, 1989). There is no evidence that the native language should be eliminated as early as possible as it might interfere with learning a second language. Instead, higher degrees of bilingualism is associated with cognitive flexibility and improved concept information (Diaz, 1983). After testing bilingual children in Canada Grosjean (1982) concludes that it is not possible to state whether the more intelligent child became bilingual or whether bilingualism aided his intellectual development, but there is no question about the fact that s/he is superior intellectually. Bilingualism can be evaluated in the context of second language acquisition concerning various domains such as intelligence, cognitive flexibility, social, natural, and language development. Concerning the effects of bilingualism on plural intelligence, some researchers (Arnberg, 1987; Baker, 1988; Genishi et al, 1994) reported a positive relationship between bilingualism and intelligence. Cummins (2000) contends, "bilingualism is associated with enhanced linguistic, cognitive, and academic development when both languages are allowed to develop," (p. 4). Furthermore, Oller (1981) explained that language may not be merely a vital link in the social side of intellectual development; it may be the very foundation of intelligence itself. Grosjean, (1983, 223) also stated that bilinguals are more sensitive to semantic relations between words, are more advanced in understanding the arbitrary assignment of names to referents, are better able to treat sentence structure analytically, are better at restructuring a perceptual situation, have greater social sensitivity and greater ability to react more flexible to cognitive feedback, are better at rule discovery tasks, and have more divergent thinking. Moreover, bilingual children's superiority in cognitive flexibility is reported by Viberg (2001) in terms of book reading activities in which the bilingual children tended to give more detailed and concrete versions in both languages than monolingual children, who tended to provide more condensed versions. As for plurilingual, it is building or maintaining knowledge of other cultures or languages while simultaneously learning about another (possibly second or third) language (Vollmer &Thanyawatpokin, 2019).

The Relationship between Bilingualism/Multilingualism and Pluralistic Intellect

As bilingualism fosters mutual understanding it fortifies social ties between different social groups and brings harmony, peace, and enrichment to the society in general (Kabadayi, 2006). It can be inferred from the research above that bilingualism involves directly in Gardner's MI (multiple intelligence) Theory of children. Gardner (1985) has determined that intelligence is a pluralistic phenomenon, rather than a static structure with a single type of intelligence. According to Gardner (1985; 1993), the use of only grade point averages and IQ scores to classify students as gifted/talented has led to growing concern about procedures for identifying gifted students. Howard Gardner has suggested that although the IQ test measures the linguistic and logical/mathematical bits of intelligence, it does not account for at least five more: (1) the kinesthetic, (2) the musical, (3) the spatial, (4) the interpersonal, and (5) the intrapersonal (Scherer, 1985). Methods other than IQ tests and grade point averages must be used for identifying gifted/talented students for language arts programs (Collins and Aiex, 1995).

Gardner (1985; 1993) identified seven bits of intelligence first and has since added an eight. The list is not meant to be final or exhaustive. The point is not the exact number of bits of intelligence, but simply the plurality of the intellect. Each person has raw biological potential. They differ in the particular intelligence profiles with which they are born and how they develop them.

Integrating MI theory with the gifted bilingual education programs

By broadly defining intelligence as Gardner has done, we can more easily discern a relationship between intelligence and second language learning. Gardner (1985; 1993) attaches important attributes that could be crucial to second language success. *Musical intelligence* could explain the relative ease that some learners have in perceiving and producing the intonation patterns of a language. *Bodily-kinesthetic* modes have already been discussed in connection with the learning of the phonology of a language. *Interpersonal intelligence* is of obvious importance in the communicative process. *Intrapersonal intelligence* encompasses extrinsic factors-sociocultural variables that emerge as the second language learner brings not just two languages into contact, but two cultures and in some sense must learn a second culture along with a second language. Attention must be given to the social interaction in which the bilingual is engaged (i.e., *inner psychological* processes) and its subsequent internalization by the bilingual participant (i.e., *intrapsychological* processes) (Haritos, 2004). One might even be able to speculate on the extent to which *spatial intelligence*, especially a "sense of direction," may assist the second culture learner in growing comfortable in new surroundings (Brown, 1987). According to Hoerr (1997), Howard Gardner was not designing a curriculum or preparing a model to be used in schools with his multiple intelligence theory.

Educators have taken the theory, put it together in different ways, and applied it to their program and curriculum development. The key points given above are all useful to the bilingual education program. They help us understand the diversity we observe in our students and provide a framework for addressing these differences in foreign (Naqvi & Khan, 2019) bilingual education. Few theories have been embraced more enthusiastically by bilingual teachers in the past few years than Gardner's Theory of Multiple Intelligences (Reid, 1997; Christison, 1997, 1998). By being bilingual, it has been shown that people develop and then use a part of their brain they otherwise wouldn't, and the same proved true for sign language and music.

This study aims to design an technology integrated instructional model for the gifted bilinguals / multilingual in our ever-changing and diverse world to develop their talents in the eighth areas based on Gardner's MI theory. The aim of the IPOF instructional model suggested is to make the learning process take place. According to Gustafson (1996), the model designed is:

1. Analyzing what is to be taught/learned;
2. Determining how it is to be taught/learned;
3. Conducting tryout and revision; and
4. Assessing whether learners do learn.

In the suggested IPOF instructional model there are a lot of factors that should be taken into consideration. These factors are closely related to each other and affect each other to a certain extent. These factors should be organized in the instructional model. In the suggested IPOF instructional model, the steps are all interrelated with each other. It is very important to order the steps in a way that will be logical and concerning other steps. All steps should be thought and chosen carefully and should be ordered in a meaningful way. Every detail can play an important role during the implementation. Every decision should be given due to a reason, not just for the sake of doing so. Due to the reason that they play an important role in the outcomes of instruction, they should seriously be taken into consideration and help designers to create a model that will help them to keep a balance between them. The suggested IPOF instructional model gives method and implication to design instruction. During the suggested IPOF instructional model process, the IPOF model helps educators to visualize the problem. If the suggested IPOF instructional model solves the learning-teaching problems, it means that it is an effective instruction that enables students to acquire specified skills, knowledge, and attitudes (Zhigalev, Obdalova, and. Minakova, 2019; Isman, 2005; Reiser & Dick, 1996).

A Suggested IPOF Instructional Model Based on MI Theory Integrated with Technology for the Gifted Pluralingual Children

An IPOF technology integrated Instructional Model here is the acronym of the model which comprises *Input – Process – Output – Feedback* chains. An IPOF Instructional Model Integrated with MI (Multiple Intelligence) Theory is presented as it demonstrates that learning a second language is a continuous and life-long process including children's various domains such as verbal, musical, mathematical, spatial, interpersonal, intrapersonal, natural, and kinesthetic bits of intelligence. It is suggested that if the instructional model is used effectively and efficiently from the start to the revision steps of the model, it will improve children's communicative capacity and help them lead a comfortable life in the society they live. Important components include the determination of the learners' needs, formulation of objectives, selection of the content, implementation of the model, and evaluation of the result, each of which is discussed in detail (see Figure 1).

IPOF technology integrated Instructional Model (Figure 1) is described as a four-step systematic planning process. These are input, process, output, and feedback. This process can be used to plan a variety of instructional approaches, ranging from teacher lectures to hands-on student-centered activities. Besides, as a result of using this process, teachers should be able to develop effective instruction. This effective instruction can help students to learn more. These students will be motivated to join class activities (Isman, 2005).
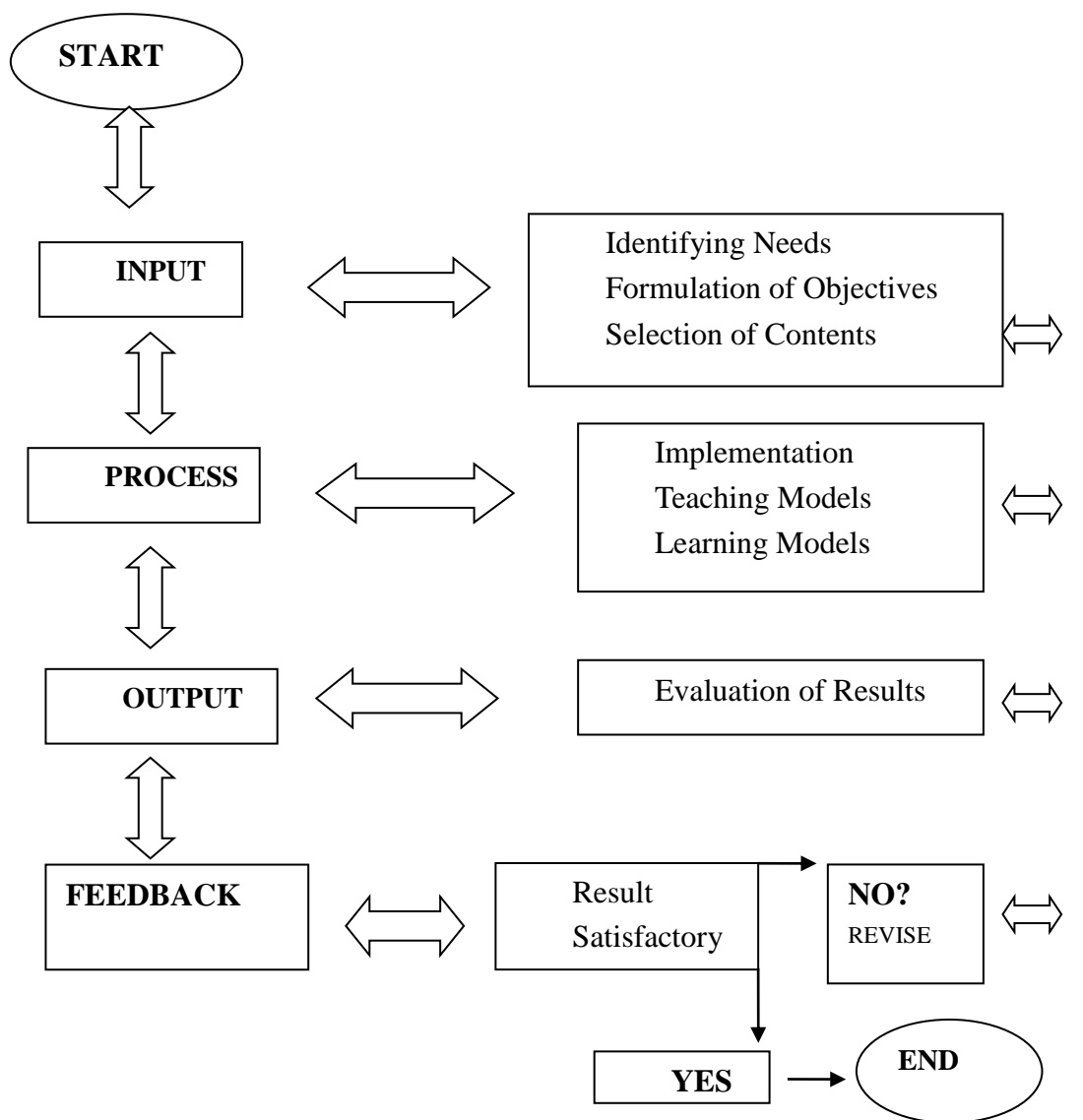
START

INPUT ⟷ Identifying Needs / Formulation of Objectives / Selection of Contents ⟷

PROCESS ⟷ Implementation / Teaching Models / Learning Models ⟷

OUTPUT ⟷ Evaluation of Results ⟷

FEEDBACK ⟷ Result Satisfactory → **NO?** REVISE ⟷

YES → **END**

Figure 1 Flow chart of the Technolog integrated IPOF Model Based on MI Theory

Determination of Learners' Needs

The first step is the determination of learners' needs. A needs assessment is a systematic exploration of the way things are and the way they should be. Kaufman (1994) described needs assessment as a process of identifying the problem and then selecting an appropriate intervention. Technology plays a vital role in this stage by offering adaptive learning analytics and digital assessments that provide detailed profiles of each learner's strengths and developmental areas. These data-driven insights help educators recognize gifted children's unique potentials across multiple domains while also identifying areas that require targeted support within sustainability education. In the instructional model, the aim is to facilitate and foster bilingual children's language skills such as speaking and listening in the early years of life, specifically the preschool years and reading and writing, in their elementary school years. While determining children's needs teachers should know about children's educational background, motivation, and societal needs (Kabadayı, 2005).

Formulation of Objectives

The major goal of the IPOF technology integrated instructional model is to demonstrate planning, developing, evaluating, and managing the instructional process. At the end of this process, it can be seen the student learning performance in instructional activities based upon defined goals and objectives. Based on identified needs, the next step in the IPOF model is to formulate clear and attainable objectives that integrate both sustainability competencies and technological skills, tailored to multiple intelligences. For example, for a child strong in spatial intelligence, objectives may include creating a digital infographic on renewable energy sources, while linguistic learners may be tasked with producing a multilingual podcast about climate change.

In the technology integrated Instructional Model of IPOF based on MI (Multiple Intelligence) Theory, objectives should be taxonomized according to *verbal/linguistic* domain parts (processing information through words), *logical/mathematical* domain parts (creating order out of chaos by analyzing, grouping, and categorizing) *musical/ rhythmic* domain parts (learning best through sound, rhythm, and music), *visual/spatial* (processing information best using pictures, visuals, and imagery), *bodily/kinesthetic* domain parts (processing information through their bodies-through muscle, sensation, and movement), *interpersonal* domain parts (processing information through relatedness to others), *intrapersonal* domain parts (having a strong sense of themselves, their wants, and needs) *naturalistic* domain parts (processing information through the ecosystem of nature including plants, animals and caves) (Gomez et al., 2005; Haritos, 2004; Bialystok, 2001; Suh and Price,1993; Brown, 1987). By the end of the process, learners should have awareness of verbal, musical, mathematical, spatial, interpersonal, intrapersonal, natural, and kinesthetic domains.

Selection of the Content

Selection of the content requires an ability to evaluate the materials that cover eight intelligence domains and to determine those that meet learners' needs. Teachers choose suitable materials for the levels of the learners. As teachers, if we believe that child development, teaching and learning share a reciprocal relationship, then a clear understanding of the general characteristics of child development and our role through social interaction can assist us in selecting materials that reflect a child's current developmental needs. In this stage, the selection of content is guided by both the objectives and the preferred learning modalities of the students. For pluralingual and gifted learners, content should be rich, authentic, and presented through multiple technological formats—interactive simulations, augmented reality experiences, multilingual e-books, or sustainability-themed virtual field trips. Content must also reflect diverse cultural perspectives and promote inclusivity. For instance, a digital storytelling app can allow learners to share local environmental issues in their mother tongues, fostering pride in cultural identity while addressing global concerns. Some suggestions can be made for teachers, who will choose materials for the gifted bilingual/multilingual learners at an early age:

• Teachers should choose materials they like since children at an early age can manipulate them because of their simplicity of structure.

• Provide the materials that bilingual children like, and that match children's age and language levels. It should be kept in mind that using various materials is good for children at this stage.

• Choose the books with a simple structure, consistent style, conflict resolution, interesting subject matter, and strong emotional content. It is argued that high levels of bilingualism are correlated with higher achievement in a great number of areas, such as the ability to read and write and the ability to think about language including metalinguistic awareness (Bialystok, 2001).

• Choose the materials involving eight bits of intelligence of bilingual children with positive values expressing joy, compassion, humor, resourcefulness (Kabadayı, 2005, 304).

Implementation of the Instructional Model

After the content is selected and organized, the teaching and learning process is organized and implemented according to the level and needs of the gifted bilinguals / multilingual. Various methods, techniques, and activities are suggested to meet the needs of bilingual children in the domains of multiple intelligences. In other words, this step can help the teacher to identify how to teach. Implementation involves applying the IPOF instructional cycle: delivering digital **Input** (multimedia resources, online expert talks); guiding **Processes** (collaborative eco-projects, game-based learning tasks); capturing **Outputs** (digital portfolios, e-presentations, apps); and enabling reflective **Feedback** (peer review platforms, AI-driven feedback tools). Throughout the model, technology facilitates dynamic engagement, differentiated instruction, and real-time formative assessment. Teachers act as facilitators who adapt instructional strategies to match the learners' intelligence profiles and cultural backgrounds, ensuring each child can act as an empowered, responsible agent for sustainability.

Soto (1991) describes successful approaches to bilingual instruction. The three most frequently used approaches are *transitional*, *maintenance / developmental*, and *two-way* bilingual. *Transitional approaches* begin with instruction in the native language and move as quickly as possible into instruction in the target language. *The maintenance developmental approach* builds language skills in the native language while simultaneously moving toward mastery of the target language. *The two-way approach* is designed for both language minority and language majority speakers with the expectation that both groups will be academically successful and become bilingual. *The immersion approach* is another one that utilizes small group one-to-one activities for instruction. The small group activities are teacher-directed (Genishi et al, 1994). Another one is the 50–50 Content Model developed by Gómez and Gómez (Gómez, 2000). It is a

unique school-wide 50–50 model that supports the academic and linguistic development of first language and second language learners across elementary grade levels (Gómez et al., 2005). Besides these, Lewis (1993, 1997a) mentioned the *lexical approach* which concentrates on developing learners' proficiency with lexis, or word combinations, institutionalized utterances, and lexical phrases as unanalyzed wholes, or "chunks," and that these chunks become the raw data by which learners perceive patterns of language traditionally thought of as grammar second language teaching. Willis & Willis (1990) emphasize that the lexical syllabus not only subsumes a structural syllabus, it also describes how the "structures" that make up the syllabus are used in natural language. To make the model in question more effective it is wise to take an eclectic approach, taking what is useful from each theory and trusting also in the evidence of our own experience as teachers as Hutchinson & Waters (1987) suggest.

By applying one of the approaches above, the teacher should introduce the basic theory to the students by some activities such as "*The Human Intelligence Hunt*" and "*Multiple Intelligence Pizza*" especially for young children as Armstrong (1994) suggested. In the second step, teachers should learn more about their multiple intelligence profiles to become more confident in the choices they make that affect their teaching. The types of learning activities teachers select are often directly related to their experiences in the real world. The choices they make as teachers, in turn, can affect the multiple intelligence profiles of the bilingual students in their classes. Teachers also naturally choose classroom activities that complement their multiple intelligence profiles (Marzano et al, 1988). It is also important for teachers to be able to identify the activities they would normally use in their lessons and identify the bits of intelligence the activities represent. Besides these, teachers must:

- Engage the bilingual children in a one-to-one conversation
- Teach rhyming folk narratives like jingles and lullabies. These folk narratives contribute the children to speak their mother tongue and target language efficiently starting from their sensorimotor period to concrete operational (Kabadayı, 2005b). Supporting this Zimmerman (1997) also claims that language production is not a syntactic rule-governed process but is instead the retrieval of larger phrasal units from memory.
- Teach anecdotes as they will develop students' cognitive, affective, and psycho-motor domains effectively (Kabadayı, 2005c).
- Adapt the conversation to the children's stages of the target language development
- Include the children in structured activities with target language-speaking peers such as repetitive rhymes, songs, and fingerplays; literacy activities, i.e., picture book reading; manipulative activities (i.e., puzzles) with an adult who used the activity consistently with consistent accompanying language as Cazden (1990) stated. Nattinger (1980) also supports that teaching should be based on the idea that language production is the piecing together of ready-made units appropriate for a particular situation since comprehension of such units is dependent on knowing the patterns to predict in different situations.
- Riddles will be the universal elements of the languages for the bilingual gifted to acquire phonology, syntax, semantics, and pragmatics, starting from the very first day of their childhood, as verbal in their middle childhood and both verbal and written form them in their late childhood (Kabadayı, 2007).
- Tongue twisters, riddles, and jingles tend to be effective ways to develop the bilingual gifted competence and performance as they have been referred to by many different labels, including "institutionalized utterances" (Lewis, 1997b) "gambits" (Keller, 1979), "speech formulae" (Peters, 1983), "lexicalized stems" (Pawley & Syder, 1983), and "lexical phrases" (Nattinger & DeCarrico, 1992).
. Creating a playful and stimulating learning environment can greatly contribute to sustainable education by fostering a lifelong love for language learning and supporting the overall development of young learners (Kabadayi, 2025).
- Show appreciation for children's language learning strategies. Second-language learners go through a distinct set of language acquisition stages. Keeping these developmental stages and techniques in mind, a teacher can feel at ease with bilingual learners as follows:

> They try what they have and if it does not work, they drop it: a trial and error approach.
> When their language does not work they lie low and do some guessing.
> They begin to communicate using gestures and approximations.
> They learn useful labels and phrases to communicate with peers (Lewis, 1997a).
> If their efforts are accepted and get results, they keep on talking.

Evaluation of the Results

The third step in the IPOF technology integrated instructional model is output. The output process involves testing and analyzes results. This process requires the teacher to implement assessment tools to determine whether the students did demonstrate the skills, knowledge, and attitudes that teacher described in instruction goals and objectives. When the students participate in the instructional activities, teachers want to know whether they learned what the instructional plan expected them to learn. To determine student learning, the educational measurement and evaluation process should be implemented by teachers. This process gives teachers results on what students learn from the instruction. Teachers should analyze the results and decide on where to go in the instruction (Isman, 2005).

Evaluation, as the output component of the instructional model, has two roles. One is to support learners' success through assessment; the other is to revise the program and to provide feedback to the whole curriculum system. In the model, the teacher is not only teaching but facilitating the lesson for his / her student. The students study cooperatively, and the teacher helps the students to capture the units. To understand whether the students learn the units or not, during the semester, the teacher gives quizzes. This kind of evaluation process is called formative evaluation. In one context, the aim is prospective, or *formative* - to improve, to understand strengths to amplify them, or to isolate weaknesses to mend (Yalın, 2003). Formative evaluation is a method of judging the worth of a program while the program activities are forming or happening. Formative evaluation focuses on the *process.* Formative evaluation analyzes strengths and weaknesses towards improving. It helps the teacher to mention the weaknesses of the students, and write those weaknesses in students' portfolios. Summative evaluation is a method of judging the worth of a program at the end of the program activities. The focus is on the *outcome* (Bhola, 1990). Teachers should develop different assessment techniques that address the eight intelligence domains of children at every stage. The best way for teachers in gifted bilingual/multilingual courses to learn about MI theory is for them to experience using as many of the techniques as they can in classes. Not only should teachers be concerned with multiple intelligences in their lesson plans, but they should also be concerned with multiple intelligences in the assessment techniques they employ. While assessing the learners' progress, teachers should use communicative events such as role-playing, retelling a story, restructuring tests they prepare themselves, and portfolios in which children prepare project work. Teachers should use various techniques to attain this goal. One of the techniques they should use is the "*find your partner*" activity, which can develop the children's bodily-kinesthetic intelligence as well as interpersonal one. By changing the focus of the assessment component, teachers can expand on the number of intelligence that is being developed in the lesson. The second one is to present a question that can be answered directly such as '*Who do you like the most in the story?*' Another is to use supposition techniques such as, '*What would you do if you were him/her?' or 'What should the character have done?*' (Kabadayi, 2005a, 306).

• The most useful way to assess the learners' understanding is to have the learners construct their story in response to a comprehension question (*Linguistics*, *bodily-kinesthetic, interpersonal and intrapersonal intelligence*).

• Gifted bilinguals / multilingual are also advised to undertake oral activities to make interaction and communication. This also needs to be provided within a context of appropriate cultural input, for example, by stories, foods, and festivals (Macrory, 2006). Choral readings, story fill-in, add-on stories, building a tale from keywords, and so on, are all options. The listeners can retell their favorite tales or invent stories based on their own experiences (*Linguistics*, *bodily-kinesthetic, interpersonal, and intrapersonal intelligence*).

• Teachers provide opportunities for the gifted children to engage in creative drama as stories naturally lend themselves to dramatization, mime, and role-play (*Linguistics*, *visual*, *bodily-kinesthetic, musical, logical, interpersonal, and intrapersonal intelligence*).

• Teachers should also teach the tunes and words very simple songs to include opportunities for the gifted bilinguals / multilingual to develop their musical intelligence as well as their natural intelligence when recited in the school garden (*Linguistics*, *visual*, *bodily-kinesthetic, musical, logical, interpersonal and intrapersonal intelligence*).

Feedback

The fourth step in the IPOF instructional model is feedback. The feedback process involves revise instruction based on the data collected during the implementation phase. If during the phase, the teacher finds that students are not learning what the plan wanted them to learn, and/or they are not enjoying the learning process, the teacher will want to go back and try to revise starting from stating the objectives and moving to the evaluation system to better enable their students to accomplish their goals, (Demirel, 1991; Isman, 2005).

If during the phase, the teacher finds that the gifted bilinguals / multilingual accomplished their goals

in the instructional activities, and the results are satisfactory, the teacher will want to go to new instructional activities.

Conclusion

In this article, firstly, contributions of bilingualism to the development of children from early to late childhood years were examined from social, educational, psychological, linguistic, and cultural aspects. Secondly, IPOF technology integrated instructional model based on MI Theory was suggested to cover the gifted bilingual/multilingual children's various domains such as verbal, musical, mathematical, spatial, interpersonal, intrapersonal, natural, and kinesthetic intelligence. Isman (2005) implemented Isman instructional model, which has similar steps with IPOF instructional model, successfully in instructional activities in the experimental group and affected academic achievement, and found that there was a significant difference between experimental group achievement and control group achievement. So, it is expected that if IPOF technology integrated instructional model is used effectively and efficiently from the start to the revision steps of the model, it will improve the gifted bilingual/multilingual children's both social and communicative capacities and help them lead a comfortable life not only in western but also, in Eastern countries they live. It is also possible to use the model with any preschoolers who require mother tongue, target language, and foreign language learning as it is a flexible model including the children's various domains. Like all other models, the IPOF instructional technology integrated model may also be criticized, but as any of the models are perfect, this model may have weaknesses for some researchers. It is suggested to use the bests of this model, according to the users, and combine these bests with the other models.

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