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## 7 **Reverse Mentoring and Intergenerational Learning in Nursing**

### 8 *Bridging generational diversity*

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14

#### 15 **Abstract**

16 Covid -19 pandemic urged technical competency and knowledge sharing among the diverse  
17 multigenerational workforce. Reverse mentoring is where a technically competent younger  
18 employee mentors the senior experienced employee and reciprocally exchanges the work culture  
19 and soft skills. Diverse intergenerational learning spurs innovation through sharing knowledge,  
20 skills, competencies, norms, and values. The ever-changing nursing practice and education with  
21 a multigenerational workforce demand a reverse mentoring approach for intergenerational  
22 knowledge sharing to enhance technical competency. Reverse mentoring is known to have  
23 benefits on quality of education, better practice outcomes, and employee development. A reverse  
24 mentoring strategy is proposed as a sustainable cost-effective intergenerational knowledge-  
25 sharing tool in the current era of economic crisis due to the Covid -19 pandemic. This paper  
26 aimed to discuss the scope of reverse mentoring and intergenerational learning in nursing. This  
27 paper provides an overview of reverse mentoring characteristics, significance, benefits,  
28 conceptual framework, implementation strategy, and application in nursing.

29 **Keywords:** Mentoring; Covid-19; Cultural Diversity; Learning; Nursing; Preceptorship;  
30 Intergenerational learning; Multigenerational Workforce.  
31

## 32 **Introduction**

33 The key challenge faced during Covid -19 pandemic was knowledge sharing among a  
34 multigenerational diverse workforce. As generations differ in their work ethic, knowledge, skills,  
35 attitudes, values, and communication styles, it is a challenge for the organizations to achieve  
36 their visions through collaborative teamwork and pose barriers to intergenerational learning.<sup>1</sup>  
37 Reverse mentoring (RM) is a cross-generational approach that allows talented and willing young  
38 employees assigned as mentors to an older senior employee, supported by the organizational  
39 vision to bridge the technology divide between the two generations and to develop future  
40 leaders.<sup>2</sup> Overcoming challenges of intergenerational learning through a reverse mentoring  
41 approach would be a choice and a strategy for the nursing profession both in practice and  
42 academia.

43  
44 It is well documented that the intergenerational learning program provides opportunities for the  
45 transfer of knowledge, skills, competencies wisdom, norms, and values between generations and  
46 provides lifelong learning and sharing between generations.<sup>3</sup> Reverse mentoring strategy is an  
47 opportunity for intergenerational knowledge sharing and thus developing and enhancing  
48 intergenerational team spirit.<sup>4</sup> In today's digital age, reverse mentoring is an important tool to  
49 develop talent and promote unity between different generations. By bringing generations  
50 together through reverse mentoring, the younger employee develops professional relationships  
51 with leaders, and exchanges skills, knowledge, and attitudes to become empowered emerging  
52 leaders for the future. With a public policy of lockdowns and physical distancing along with the  
53 global economic crisis during the Covid-19 pandemic period, all organizations can facilitate the  
54 cost-effective reverse mentoring approach to build a technically competent workforce. This  
55 paper aimed to discuss the scope of the reverse mentoring approach for intergenerational  
56 learning in nursing practice and academia. This paper provides an overview of reverse mentoring  
57 characteristics, significance, benefits, conceptual framework, implementation strategy, and  
58 application in nursing.

59

## 60 ***Significance of Reverse Mentoring***

61 Demographic shifts in the workforce are inevitable. The 2019 Deloitte Millennial Survey reports  
62 that, globally in the near future, Millennials will make up 75% of the workforce, most Baby

63 Boomers will retire, and the number of Generation Xers will reduce.<sup>5</sup> In the current era of  
64 diverse staff, RM is proposed to be a tool for developing an engaged and committed multi-  
65 generational workforce and it bridges the generational gap. Kwoh in her work “Reverse  
66 Mentoring Cracks Workplace”, highlights the importance of Millennials in an organization, as  
67 they often bring new, innovative ideas and skills to the table, they are tech-savvy, racially  
68 diverse, socially well-connected, and collaborative by nature.<sup>6</sup> Baby Boomers, on the other hand,  
69 typically bring experience, best practices, and a long history of good work ethic to the table.  
70 Interacting with people from different generations brings out the best, as it helps each other to  
71 realize the worth of diverse perspectives and ignites to think innovatively and creatively.<sup>7</sup> A new  
72 way of working such as remote working, teleworking, and flexible working enabled by high  
73 technology gained significance in the light of the Covid 19 pandemic.<sup>8,9</sup> With global lockdown  
74 and physical distancing, a reverse mentoring approach within organizations would be a choice to  
75 facilitate intergenerational learning among a diverse staff.

76 The global nursing workforce comprises three different generations with differences in  
77 professional backgrounds, ideologies, beliefs, work practices, and attitudes. The three  
78 generations based on their year of birth, the Baby Boomers (1946 to 1964), Generation X (1965  
79 to 1980), and the Millennials or Generations Y (1981 to 2000) created a significant diversity  
80 among the current workforce.<sup>10</sup> Statistics show that, out of over 3.1 million nurses, 50.2% are  
81 Baby Boomers, 30.4% are Generation Xers and 19.4% are Millennials. A strength and weakness  
82 analysis among these three categories shows major differences, where 73% of workers agreed  
83 that Baby Boomers are hardworking but lack technical skills, GenXers are good relationship  
84 builders and revenue generators, and Millennials are enthusiastic learners with technical and  
85 social-media skills as assets. Understanding the different categories of nurses and analyzing their  
86 strengths and weaknesses can facilitate a well-planned initiation of a reverse-monitoring program  
87 in an organization that enhance healthcare quality and improve patient safety.<sup>11</sup>

88 Intergenerational communication and interaction with priority to health and wellbeing, create  
89 opportunities for positive intergenerational interactions between generations thus it reduces the  
90 gap between diverse generations.<sup>3</sup> As online teaching-learning activities are the iconic method  
91 during this pandemic period of Covid 19, the reverse mentoring approach and intergenerational  
92 learning are significant means to empower diverse faculty. Research findings revealed that  
93 reverse mentoring is an efficient tool for sharing knowledge by creative involvement, leadership

94 development, and the development of intergenerational relationships based on mutual  
95 acceptance.<sup>12</sup>

96  
97 The increasing worldwide diversity in nurses and nursing faculties demands this  
98 intergenerational mentoring, both in practice and nursing education. With the global economic  
99 crisis due to Covid 19, organizations can facilitate a cost-effective reverse mentoring approach to  
100 build a technically competent workforce. The need to rethink new ways of mentoring strategies  
101 to promote knowledge and skill transfer and overcome challenges of the current pandemic  
102 situation by enhancing the technical competency of a diversified workforce both in nursing  
103 practice and academia is of high priority. Although previous studies report that organizations  
104 promote generational diversity as it guarantees team spirit and performance, it creates challenges  
105 in knowledge transfer.<sup>13</sup> Despite the advantages of reverse mentoring limited adoption of this  
106 reciprocal mentoring is reported, indicating the need to have more efforts to promote the reverse  
107 mentoring approach for intergenerational learning among diverse generations in modern  
108 organizations.<sup>8</sup>

### 110 ***Essential Characteristics of Reverse Mentoring***

111 Mentoring is a best-practice leadership-development program, through which employers hope to  
112 inculcate commitment in employees by treating them as unique resources for competitive  
113 advantage.<sup>14</sup> Satterly, Cullen, and Dyson developed a model of intergenerational mentoring  
114 model and recommended a reverse-mentoring model that considered the age and experience of  
115 the faculty.<sup>15</sup> This intergenerational mentoring model acknowledges the skills each generation  
116 brings to the academic environment and is based on the slogan “Everyone leads; everyone  
117 learns”. Reverse mentoring ensures continuous organizational learning by meeting specific needs  
118 in a collective and efficient way by creating role models and offering carrier-related and  
119 psychological support, along with target-oriented education ensuring career development for  
120 leaders and the success of both individuals and organizations.<sup>2,16</sup> Interpersonal comfort, trust and  
121 mutual respect between employees and employers is emphasized.

122  
123 The main features of the reverse-mentoring process are its innovative non-hierarchical approach,  
124 novice mentor, and bidirectional relationship. Compartmentalized mentoring on new skills such

125 as the latest applications, informatics, podcasts, e-learning, and electronic databases are focused.  
126 It also ensures continuous organizational learning with respect to cultural differences by meeting  
127 specific identified needs in a collective and efficient manner.<sup>2, 11,15.</sup> The success of reverse  
128 mentoring depends on the degree of mentor/mentee relationship, their level of engagement, the  
129 type and amount of organizational support, especially the engagement of higher officers, and  
130 conducive organizational culture are the main organizational support needed for the successful  
131 accomplishment of reverse mentoring.<sup>11</sup> Clarke et al recommended certain essential attributes  
132 and behaviors for both mentees and mentors to ensure successful reverse mentoring (Table 1).<sup>17</sup>

### 134 **Theoretical Base and Conceptual Framework of Reverse Mentoring**

135 Satterly, Cullen, and Dyson developed an intergenerational mentoring model and recommended  
136 a reverse-mentoring model that considered the age and experience of the faculty.<sup>15</sup> Reverse  
137 mentoring is being outlined using various theories and the use of theoretical frameworks in RM  
138 continues to expand as more and more intergenerational learning strategies are made into  
139 practice. Reverse mentoring is more rooted in social and learning theories.<sup>11,18</sup> This paper  
140 focuses on the adult-learning (andragogy) and social theoretical bases to relate the concepts in  
141 reverse mentoring.

142  
143 Learning through the intergenerational mentoring model is based on the adult learning theory by  
144 Knowles<sup>19</sup> as it identifies all key elements, including a learner's need to know, self-concept,  
145 experience, readiness to learn, orientation to learning, and motivation. When exploring the  
146 theoretical support for reverse mentoring, Zauschner-Studnicka related adult learning theory to  
147 reverse mentoring from an educational perspective.<sup>18</sup> Reverse mentoring meets the adult  
148 developmental needs of both the mentee and mentor. Adult learners obtain new knowledge first  
149 through understanding, then through application at work, where they examine their work,  
150 synthesize new answers to solve problems, and evaluate various strategies and solutions to  
151 benefit the organization and themselves.

152  
153 Social theories consider mentors as role models. Promoting technical competence and knowledge  
154 sharing, networking, and exchanging information are the key features of RM. Reverse mentoring  
155 has been used traditionally as a social exchange tool to leverage the expertise of generations.

156 Many studies have used social exchange theory and leader-member exchange (LMX) theory as a  
157 theoretical framework<sup>20</sup> Mentoring has been related to social exchange theory due to its focus on  
158 dyadic relationships, reciprocity, and the relationship that develops as an important element for  
159 individuals' growth in their careers. Social exchange theory has been extended into the  
160 leadership domain, with leader-member exchange (LMX) theory. Leader-member exchange is  
161 goal-directed intergenerational learning focusing on the innovative technological advancement of  
162 seniors by pairing with expert juniors, which also paves the milieu to facilitate emotional  
163 intimacy and socializing with the younger generation. The conceptual framework of reverse  
164 mentoring is illustrated in the figure.<sup>1</sup>

165

### 166 ***Overview and Outcomes of Reverse Mentoring***

167 The essential attributes of the mentee, mentor, mentoring relationship characteristics and  
168 functions, organizational goals, and the outcomes are presented in Figure 2. Figure 2 is a replica  
169 of a brief overview of what is happening in reverse mentoring. The mentor-mentee attributes  
170 explain in a glimpse what characteristics or contributions the mentor and mentee have and the  
171 outcome they receive with the reverse mentoring process. Also, the figure reflects the functions  
172 that go into the process along with the characteristics of the relationship between the mentee and  
173 mentor. The benefit for the organization such as sustainable healthy work culture with job  
174 satisfaction contributing to low attrition and good outcomes are also portrayed in the figure.

175

### 176 ***Implementation strategy for reverse mentoring***

177 Introducing reverse mentoring in an organization can be considered either as a standalone  
178 mentoring program or as part of existing mentoring initiatives. The perceived organizational  
179 support (POS) and the leader-member exchange (LMX) are the two social exchange mechanisms  
180 explained by Choudhuri & Gosh.<sup>20</sup>

181

182 Perceived organizational support ensures the collaboration between employees and the  
183 organization, and will foster employee morale by making them feel valued for their  
184 contributions. Leader-member exchange: inter-generational exchange emphasizes inter-  
185 generational exchange, where seniors are paired with juniors to achieve a predetermined goal  
186 related to current technological advancements. Such pairings facilitate emotional intimacy and

187 socializing with the younger generation. There is no one-size-fits-all reverse mentoring program  
188 as each organization has to feel authentic to workplace culture and generation gap.<sup>21</sup> It is  
189 advisable that each institution embrace the concept of reverse mentoring and foster it wherever  
190 possible.

191

### 192 ***Steps to implement an effective reverse mentoring program in an organization***

193 The aim of reverse mentoring should focus on specific organizational visions and goals.  
194 Appropriate pairing, clear goals, and set guidelines are crucial factors for reverse mentoring.  
195 Organizations should plan and initiate reverse-mentoring programs meticulously and in a  
196 sequential way. Figure 3 shows the process of implementing reverse mentoring in an  
197 organization.

198

199 At first, a thorough initial assessment of the setting, nature of employees, and the organizational  
200 vision and mission are the fundamentals for identifying and setting objectives based on the needs  
201 and skills in initiating the reverse-mentoring program. Always benchmark with organizations  
202 practicing reverse mentoring. The next important step is finding professional pairing with an  
203 appropriately matched mentor and mentee on basis of identified needs and skills. Effective  
204 mentoring is based on the chemistry of the partners. Right pairing is important and mostly based  
205 on a passion to share and commitment. Then implementing the plan of the intergenerational  
206 model of reverse mentoring with administrative support. The key step to consider for effective  
207 implementation is to develop a reverse-mentoring agreement. This step calls to define specific  
208 reasons for mentoring and develop mentoring goals and plans. Specific policies and protocols act  
209 as frameworks to be followed. At this stage, both the mentee and mentor must agree on the rules  
210 and regulations. A written agreement must be agreed upon by both parties. After this agreement,  
211 the next step is to consider the negotiation of agreements. RM calls for rules but, embraces a  
212 workplace flexibility culture to facilitate new learning. Execution and practice by the mentee for  
213 a contract period is the next step. The mentor must ensure that the mentee practices the new  
214 concepts and tools. Establish ongoing feedback to evaluate their progress continuously based on  
215 agreed objectives as the next step. This will be followed by the analysis of the reverse mentoring  
216 program for its impact and feasibility. Based on the analysis plan either continue the same plan  
217 or modify and restructure it to suit the organizational need and implement new plans.<sup>18,21</sup>

218 **Reverse mentoring and intergenerational learning in nursing**

219 Medical, nursing and all allied medical professions are dynamically advancing. This diverse set  
220 of professionals needs constant and continual education regarding rapid technological  
221 development. The advances in technology have a tremendous impact, both in practice and in  
222 academia, which necessitates reverse mentoring to ensure seniors with new technological  
223 competency. in a cost-effective and convenient way.

224  
225 Most hospital units have diverse nursing populations ranging from traditionalists, baby boomers,  
226 and Gen X and Gen Y /Millennials. They come with their own sets of skills and values. Hence it  
227 is essential for nurse managers to support and appreciate intergenerational learning in nursing  
228 units. Quoting an example from a 28 bedded oncology clinical unit. The unit had recently  
229 implemented the latest method of charting patient details which is completely computerized. In  
230 all the unit had 21 registered nurses who were equally distributed in the category of baby  
231 boomers, Gen X, and Millennials. The Millennials, having strong skills to handle computers  
232 were recruited to support the rest of the team members while the new charting system got  
233 implemented. Eventually, the Millennials known as the “Super Users” fell into the mentoring  
234 role thus offering full support in slowly transitioning the nurses belonging to the baby boomers  
235 and the Gen X. As verbalized by the Millennials the new mentoring role made them feel valued  
236 and developed a cohesiveness into the team while the senior nurses learned the charting system  
237 with their help. Thus reverse mentoring is instrumental in creating a synergistic work  
238 environment for all.<sup>22</sup> A similar but unique kind of reverse mentoring program among healthcare  
239 workers was trialed in the St. Thomas’ and Grey’s NHS Foundation trust in 2018 known as  
240 Reverse Mentoring for Equality, Diversity, and Inclusion (ReMEDI). Here a senior white staff  
241 was the mentee and the junior staff from the Black and Minority Ethnic(BME) was the mentor.  
242 The program was unfurled to enhance openness, understand the cultural differences and  
243 minimize discrimination. The mentee often held an administrative position and this ReMEDI  
244 allowed exploring the subject’s equality, diversity, and inclusion practices at individual,  
245 departmental, organizational, and symbolic levels.<sup>23</sup>

246  
247 The review aimed to investigate the benefits of the intergenerational program for children and  
248 older adults and its application in the health care system by Aemmi, et al <sup>3</sup> concluded that



249 intergenerational learning provided the best resources for the social and emotional growth of  
250 children and older adults and they recommended that intergenerational learning approach can be  
251 used for nursing care, education and follow-up in health care systems especially by nurses. The  
252 impact of intergenerational learning among young people and older adults during Covid 19 was  
253 explored in China. The main focus of intergenerational sharing was on pandemic prevention,  
254 health and fitness, traditional culture, and information literacy. They reported that both  
255 generations shared and gained more knowledge on health, life skills, and values, the older  
256 generation become more perspective in their learning and behaviors, younger generation  
257 cultivated the concept of lifelong learning and closer relationship.<sup>24</sup>

258

259 Initiating reverse mentoring is a simpler, more low-cost way to bridge the learning gap than  
260 investing in training and development. This cross-generational training can be achieved by  
261 maintaining the traditional mentor-mentee pairing. Each organization can embrace the reverse-  
262 mentoring concept as complementary to traditional mentoring to enhance workplace  
263 relationships. Pairing and collaboration on projects and research interconnect them in  
264 organizational, global, academic, and social perspectives.

265

266 The ever-changing academic environment demands that diverse nursing faculty are in need of  
267 mentoring for new technology use in education. The familiarity of the current generation with  
268 informatics, along with their skills in handling innovative technology are important factors for  
269 their social interconnection and collaboration, while senior faculty can pass on work ethic and  
270 best practices to junior mentors, RM help to address academic generation gaps. Thus, in light of  
271 the knowledge and experience of Millennials on technology and innovative approaches to  
272 teaching, the use of reverse mentoring would be advantageous for senior nursing faculty to  
273 effectively meet the learning needs of the current generations of students who are on the online  
274 platform. Considering the intergenerational faculty workforce, three steps must be carried out  
275 for reverse mentoring: (1) assessing the needs and skillsets of faculty, (2) grouping and matching  
276 faculty based on their needs and skills, (3) implementing intergenerational faculty mentoring.  
277 The diversity of academic departments in their size and structure does not allow a specific model  
278 to be adopted on a unilateral basis; rather, it calls for varying models of reverse mentoring in

279 each department to cater to specific needs. The goal of intergenerational mentoring is to enhance  
280 learning and knowledge sharing among multigenerational participants.

281  
282 In higher education sector is with trends of intergenerational population both in terms of faculty  
283 and students. The twenty first century with the novice Millennials, Gen Xers and boomers as  
284 faculty demand intergenerational collaboration through reverse mentoring models without a  
285 hierarchical framework. As everyone is considered with potential to learn and lead, this  
286 innovative knowledge sharing within educational and practice area contribute to enhancing each  
287 one's essential skills and boost self-esteem contributing to organizational goals and mission. The  
288 reverse mentoring and educational interconnections are inevitable as the faculty development in  
289 view of teaching-learning, scholarship, and services are enhanced through intergenerational  
290 collaboration.

291  
292 Reverse mentoring can be very useful in nurse education. For example, Quality and Safety  
293 Education in Nursing (QSEN) recommends informatics and teamwork as core competencies of  
294 student learning outcomes.<sup>25</sup> Older faculties would find it difficult to keep up with new  
295 technologies such as e-learning modules, apps, online forums, and electronic databases, whereas,  
296 Millennials are always at the forefront of advancing technology thus RM approach can bridge  
297 this gap between generations. Reverse mentoring reduces generational tension through creative  
298 discussion and fostering understanding by building trust, positive attitudes, and mutual respect;  
299 thus, reverse mentoring equips diverse faculties with the ability to serve young students with  
300 advanced skills in online education. Currently, all higher-education organizations must remain  
301 technological, challenging, and competitive and consider how to effectively manage their  
302 demographically diverse faculty who serve technically competent students. Though Boomers and  
303 the Millennials are the two fundamentally opposed workforce segments, reverse-mentoring  
304 programs allow them to excel in teaching-learning in online mode. The proper pairing,  
305 experience, and personality of a mentor are common challenges experienced in mentoring in  
306 medical academia.<sup>26</sup> Therefore, appropriate planning, pairing, mentoring workshops,  
307 organizational guidelines, and a culture of support are essentials for smooth reverse mentoring.

308

309 **Limitations**

310 Although reverse mentoring is promising for the upward growth of an organization, its potential  
311 limitations could affect the initiation and acceptance of this approach. Cross-cultural differences  
312 could complicate smooth relationships. Communication is a key challenge among diverse  
313 employees, and encouraging an amicable and accepting mentality among generations would help  
314 to set aside their egos and enhance professional growth. A lack of confidence of young mentors  
315 in interacting with seniors, along with the power imbalance in pairing, could hinder smooth  
316 information exchange. However, through mutual respect, effective communication skills,  
317 professionalism, and reciprocity, along with effective organizational culture building and  
318 support, reverse mentoring can be implemented well and is the need of the hour to enhance  
319 intergenerational learning in the nursing field.

320

321 **Conclusion**

322 Reverse mentoring is the best practice for intergenerational learning and this bidirectional  
323 innovative approach will transform and empower a multi-generational diverse workforce. It  
324 reduces the digital divide among diverse faculty and practitioners with positive outcomes at the  
325 individual, departmental and organizational levels. Though sequential steps are recommended for  
326 RM implementation, each organization must tailor it to suit its specific needs while planning and  
327 implementing a reverse mentoring program. With the dynamic technological innovations,  
328 advancing health care and in the era of online and technology-based nursing education, the role  
329 of junior faculty as a mentor to senior faculty, augment intra and interdisciplinary collaboration  
330 in all aspects of service, education, research, and ensures better health care outcomes. Mutual  
331 respect, reciprocity, and effective communication reduce the potential limitations of RM.

332

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338 The authors declare no conflicts of interest.

339

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343 **Authors' Contribution**

344 All authors have contributed to this work from the conception of the idea till the review of the  
345 final edition of the manuscript. GM conceptualized the topic and prepared an initial draft of the  
346 manuscript. FF and LJJ made a substantial contribution to the design and preparation of the  
347 manuscript. All authors were involved in drafting and revising the manuscript for intelligent  
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349

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406 [conversation-with-debra-arbit-of-bridgeworks-helping-companies-resolve-clashes-among-](http://www.startribune.com/a-conversation-with-debra-arbit-of-bridgeworks-helping-companies-resolve-clashes-among-generations/387870212/?refresh=true)  
407 [generations/387870212/?refresh=true](http://www.startribune.com/a-conversation-with-debra-arbit-of-bridgeworks-helping-companies-resolve-clashes-among-generations/387870212/?refresh=true)

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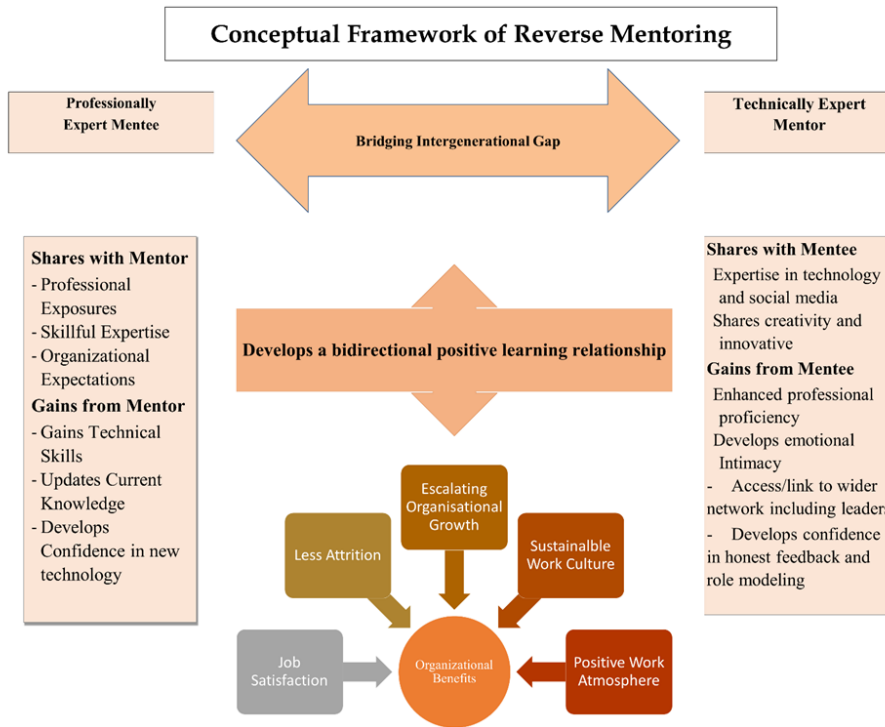
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422 **Table 1: Behaviours of Effective Mentors and Mentees in Reverse Mentoring**

<b>Expected Behaviours</b>	
<b>Mentor</b>	<b>Mentee</b>
Respects and acknowledges the expertise of the mentee	Shows respect for the skills of the mentor
Acknowledges the limitations of the mentee, who has extensive responsibilities	Articulates their needs clearly to the mentor
Encourages joint learning objectives and ensures skill outcomes	May require practice and review to improve specific skills
Provides a comfortable learning environment	Affective-based learning, allowing changes in attitude

Identifies the resources required to achieve set goals	Formulates objective-based activities to achieve goals
Provides opportunities for the mentee to assess their own needs and progress	Conducts periodic self-reflection
Actively listens to the needs of the mentee to improve cross-generational communication	Acknowledges areas for improvement and verbalizes them to their mentor

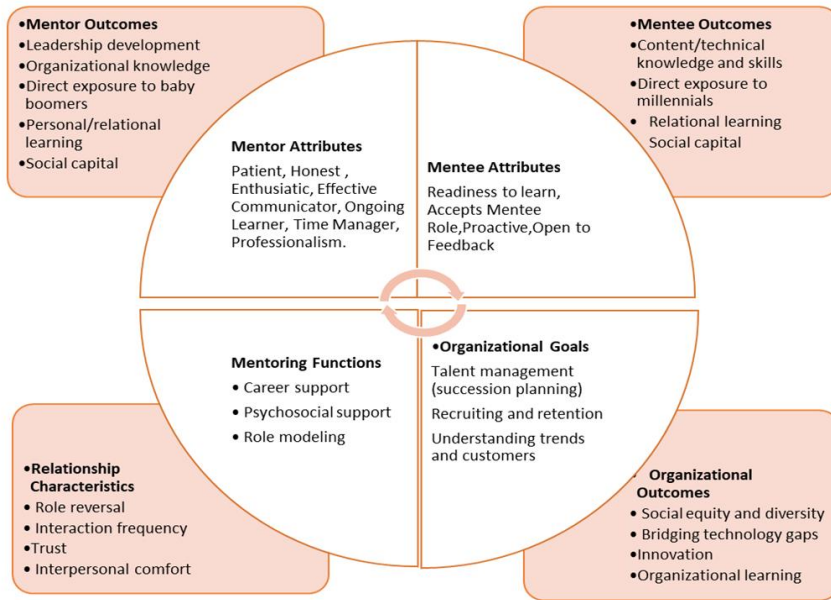
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425 **Figure 1: The Conceptual Framework of Reverse Mentoring**

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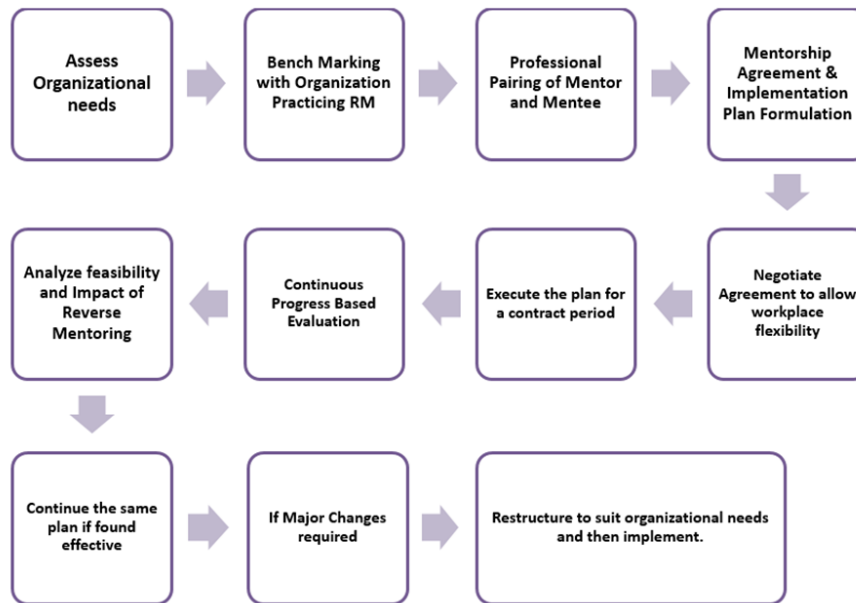


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427 **Figure 2: Overview and Outcomes of Reverse Mentoring**

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**PROCESS CHART**



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430 **Figure 3: Process of Implementing Reverse Mentoring**